

Institute of Research Oct 27 B  
In Social Service 375  
University of N C, P O Box 711  
Chapel Hill N C

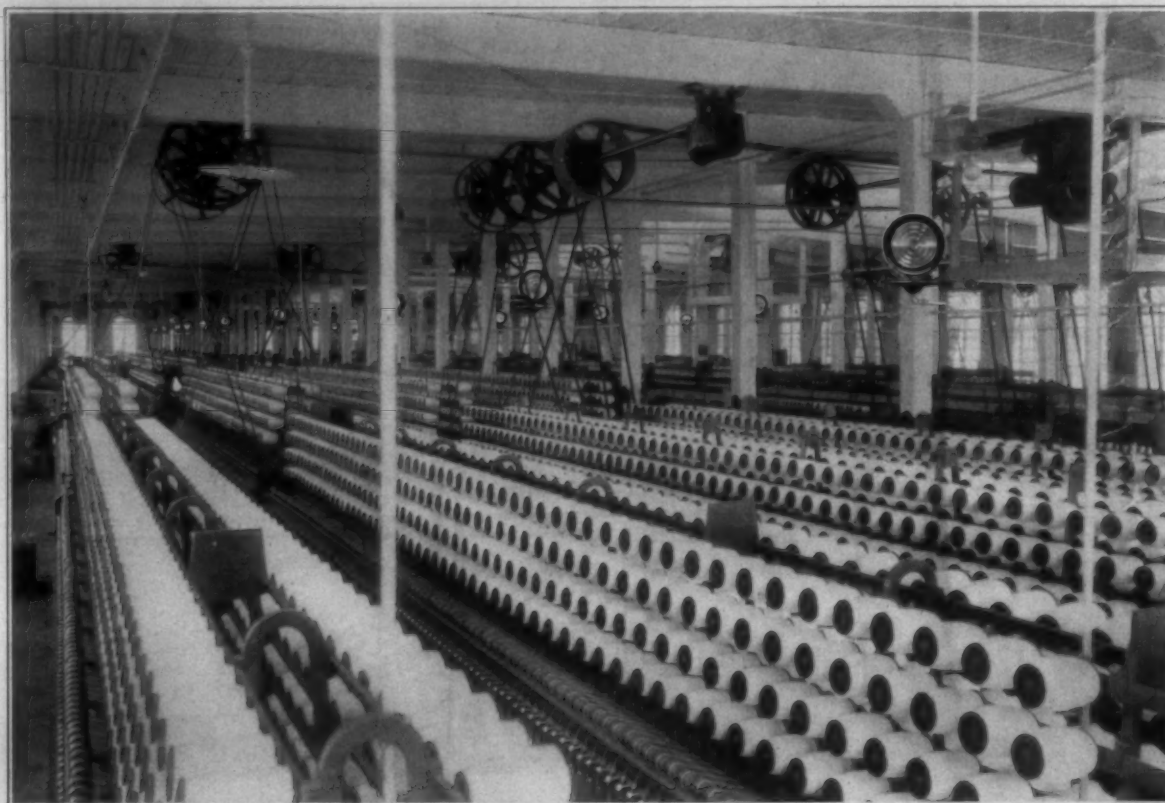
INSTITUTE FOR  
RESEARCH IN  
SOCIAL SCIENCE

# SOUTHERN TEXTILE BULLETIN

VOL. 32

CHARLOTTE, N. C., THURSDAY, MARCH 31, 1927

NUMBER 5



Bahnson Humidifiers—reliable, automatic sentinels—take care of the humidity needed in Amazon Cotton Mills, Thomasville, N. C.

## Confidence In Your Humidifiers:

You know they are maintaining the *correct* amount of humidity in all parts of the room, and the continuous air circulation they produce is forcing the moisture into the material evenly and thoroughly so that the yarn or cloth always comes through in standard weight;

You know these reliable machines are giving just the results you want at a surprisingly low maintenance cost;

Because they are BAHNSON HUMIDIFIERS, and you can always rely on Bahnsons.

## The Bahnson Company

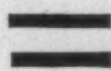
Humidification Engineers

Winston-Salem, N. C.

New York Office: 93 Worth Street



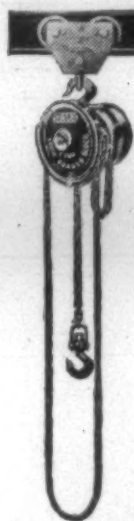
Five Men and a Hand-Truck



equal



One Man and a Yale Spur-Gear Chain Block on a beam trolley.



AND the one man with the Yale equipment will perform the same work in the Safest Way, take up less working space, and do it quicker.

The Yale Spur-Gear Block is the *safest*, *speediest*, portable hand hoist.

**"From Hook-to-Hook-a-Line-of-Steel"**

The new Yale catalog shows you many ways to save money and increase production in your plant by using Yale Chain Blocks and Electric Hoists.

*Let us send you your copy*

Textile Mill Supply Co.



Everything In Mill and Factory Supplies

## Textile Mill Supply Co.

INCORPORATED 1898

CHARLOTTE, N. C.

AGENTS FOR

Graton & Knight

Leather Belting

The Dana S. Courtney Co.

Bobbins, Spools etc.

DODGE

Hangers, Pulleys, Couplings

Card Clothing

Reeds

WYANDOTTE

Concentrated Ash

Textile Soda

K. B. Special Ash

Detergent

We Carry a Complete Stock and Can Make Immediate Shipment

## SHUTTLES?

THE J. H. WILLIAMS CO.

MILLBURY - MASS.



THE SHUTTLE PEOPLE

Geo. F. Bahan

Southern Representative

Box 581

Charlotte, N. C.

## Card Clothing

Correctly manufactured is of vital importance in the preparation of your product

Our 60 years experience

Our complete organization for service

Our continual growth

places us in the forefront

Howard Bros.  
Manufacturing Company

ESTABLISHED 1866

Home Office and Factory, Worcester, Mass.

Southern Branch Factory

Southern Branch Office

E. M. TERRYBERRY, Southern Agent

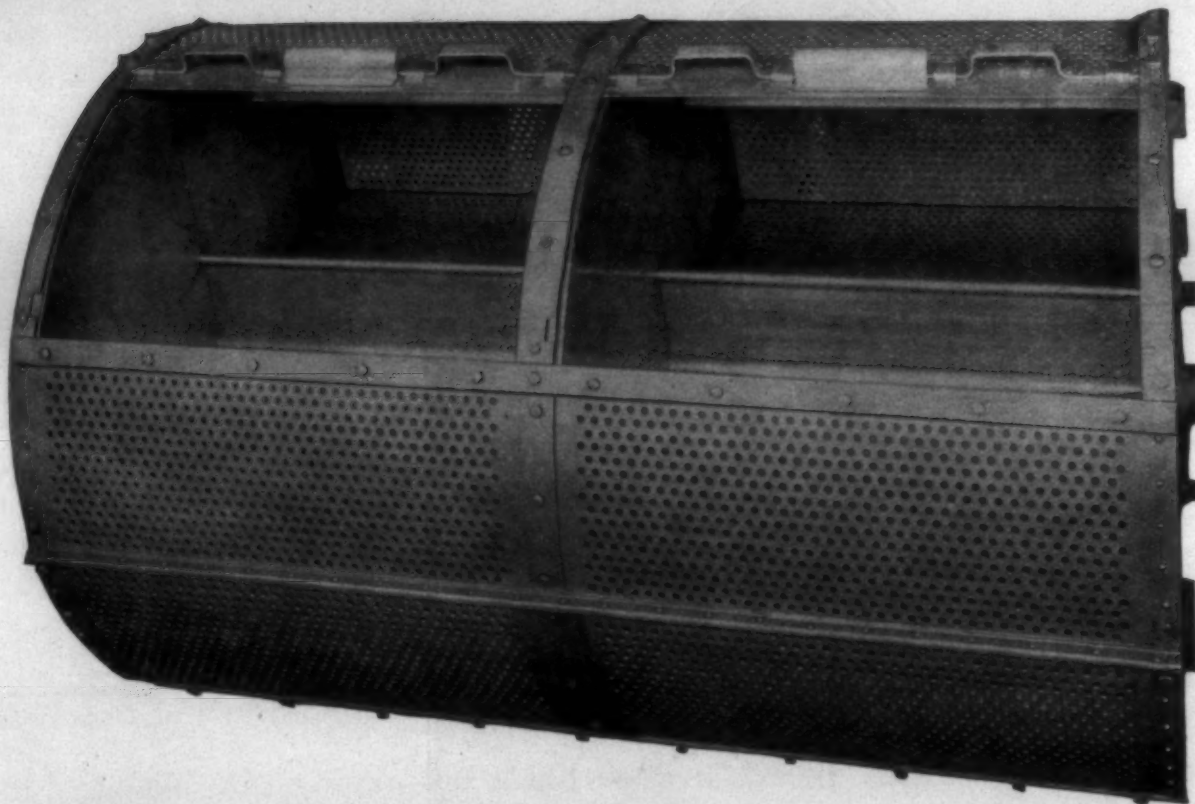
167-169 South Forsyth St., Atlanta, Ga.

1126 Healey Bldg., Atlanta, Ga.

G. L. MELCHOR, Asst.



# What people say about the NEW Klauder-Weldon Hosiery Dyer



[Cylinder for 100-pound hosiery dyeing machine—  
four compartments. In machines of larger capacity  
the number of compartments is increased]

## "Installing More"

"The fact that we are installing more Klauder-Weldon hosiery dyers is the best evidence we believe of our satisfaction with them."

From a letter by a concern who installed the  
new Klauder-Weldon Dyeing Machines.

We have a folder showing all details of Klauder-Weldon Hosiery Dyers. Your copy is ready to mail now.

New Klauder  
Weldon  
Hosiery Dyer  
to be exhibited

See the last word  
in Hosiery Dyeing  
Machinery at the  
Knitting Arts Ex-  
hibit, Phila., Pa.—  
April 4-8—Spaces  
308-9-10-45-46-47

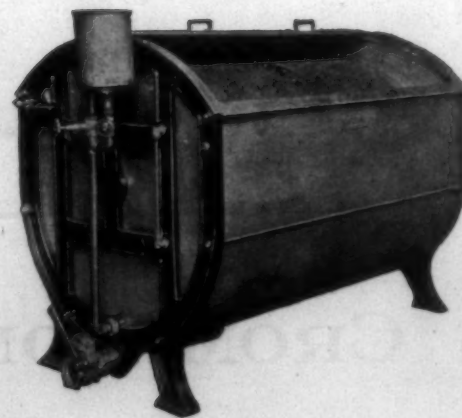
KLAUDER-WELDON DYEING MACHINE DIVISION  
H. W. BUTTERWORTH & SONS COMPANY

BETHAYRES, PA.

PLANTS AT PHILADELPHIA AND BETHAYRES

Philadelphia, Pa.; Providence, R. I., and Charlotte, N. C.

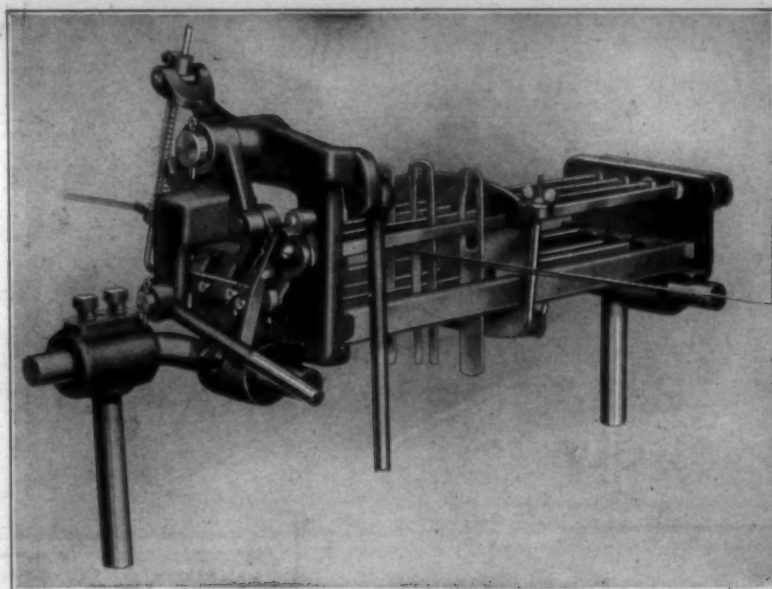
Canadian Representatives: W. J. Westaway Company, Hamilton, Ontario, Canada



# BUTTERWORTH *Finishing* MACHINERY



## Mechanical Warp Stop Motions



Nearly 15,000 sold during 1925

For:—

COTTON

SILK

WORSTED

RAYON

(Protected by patents)

(and other fabrics)

# CROMPTON & KNOWLES LOOM WORKS

WORCESTER, MASS.

PROVIDENCE, R.I.

PHILADELPHIA, PA.

ALLENTOWN, PA.

PATERSON, N.J.

S. B. Alexander, Southern Manager, Charlotte, N. C.



## *Its surface never roughens and so it cannot scratch*

CELANESE brand yarn retains its strength under all normal conditions of service. It is unaffected by moisture. Not even perspiration or salt-water harms it. More resilient than silk itself, it sturdily endures prolonged wear.

Its surface always preserves its perfect regularity and exquisite smoothness. Hence fabrics made from it never grow fuzzy and cannot chafe the most sensitive skin.

This is one of the many factors that have made Celanese brand yarn so popular for fine lingerie, pajamas and hosiery.

Celanese brand yarn is highly elastic and remarkably durable; and it has unique hygienic qualities. The dyestuffs used for dyeing Celanese brand fabrics give colors that are unusually fast to sun, suds, salt-water and perspiration.

# CELANESE

REG. U.S. PAT. OFF.  
BRAND YARNS

*The* AMERICAN CELLULOSE & CHEMICAL  
MANUFACTURING COMPANY, Ltd

15 EAST 26TH STREET, NEW YORK

WORKS AT AMCELLE (NEAR CUMBERLAND) MARYLAND

SOUTHERN REPRESENTATIVE: TODD B. MEISENHEIMER, 1116 JOHNSTON BUILDING  
CHARLOTTE, N. C.

# THE NEWPORT COLORS

*"Coal  
to  
Dyestuff"*

*YOU want fast colors.*

**We have the dyes you need  
to produce them.**

**Our technical staff is always  
at your service.**



**NEWPORT CHEMICAL WORKS, Inc.**

**PASSAIC, NEW JERSEY**

**BRANCH OFFICES AND WAREHOUSES**

**Boston, Mass., Providence, R. I., Philadelphia, Pa., Chicago, Ill., Greensboro, N. C., Greenville, S. C.**



# SOUTHERN TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 18 WEST FOURTH STREET, CHARLOTTE, N. C. SUBSCRIPTION \$2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MARCH 3, 1897.

VOL. 32

CHARLOTTE, N. C., THURSDAY, MARCH 31, 1927

NUMBER 4

## *Obtaining Managerial Control By Disclosing Abnormal Factors of Cost*

IN presenting my subject to you today, I am going to imagine that you are already engaged in the textile industry, as managers or executives of cotton mills. I am presuming that you will be interested in any practical plan that will assemble your weekly production and expenditures, and show them up in such a manner as to aid you in managing your business.

When we speak of "management," in one sense of the word we mean "control." Management means control, and when we control a business, we mean that we control the abnormal, or the unusual, tendencies of that business. We don't mean that we control its normal tendencies. Such tendencies are usually taking care of themselves and do not need to be managed or controlled.

As it is expected that you will be managers or executives of cotton mills, I believe you will want to know how it is practically possible for an accounting department to give you each week information regarding your actual production and actual expenditures, and how it is possible to present this information to you in comparison with possible productions and necessary expenditures, so as to aid you in determining where subnormal conditions of production and abnormal conditions of expenditures exist in the mill.

I am not going to spend any time in trying to show you, even if I could, how it is possible by accounting and mathematical sleight-of-hand to obtain the actual cost of making any quantity, style or construction of cotton goods. I am not going to do so for, frankly speaking, I have never been sold upon the practical value of spending much time in trying to get the cost of something which, when based upon actualities is changing every day and hour in the week, and when you are skillful enough to obtain it you generally find that it contains very few elements in it that will aid you in managing the business. Productions and expenditures are constantly changing in a cotton mill, and the very process that it is necessary to go through to obtain the actual cost, eliminates to a great extent the possibility of separating the cost of a subnormal production and the amount of abnormal expenditures from the normal cost; the very thing in which an executives is most in-

Lecture by Frederick Moore, C. P. A.,\* during Textile Week at N. C. State College, Raleigh, March 25.

terested from the standpoint of management.

Again, for another reason, I am not going to go into this matter of determining the actual cost. That reason is this: The majority of manufacturers of cotton goods in the South are making a staple line of goods. These goods are made to be sold for what the market will bring for them—generally through the medium of sales agents; or they are made under sales orders, the prices of which are largely determined in advance by prevailing market conditions. The manufacturer cannot, therefore, fix a price at which his goods are to be sold, which price would be based upon the actual cost, plus a reasonable profit. He is not, therefore, from a selling standpoint, anxious that his accounting department spend much time in getting a detailed actual cost of his goods, unless in getting that cost, that department arrives at information which will assist him in controlling and in reducing the cost.

The executive may want to know, however, the average actual cost of making his entire product, based upon actual production and actual expenditures. Most mills obtain this cost. It is merely a matter of production and expenditures. The executive may want to go still further and require his accountants to obtain the average actual cost of making every staple or construction of goods in his mill. He may want to take the time to do this. But, whether or not he does, there are two things from the standpoint of management that he has got to know. He has got to know:

First: How much more he is expending in each important operation of the mill than he ought to be expending.

Second: How much less production he is getting on each hank roving, yarn count, or cloth construction, than he ought to be getting.

Unless the accounting department is giving him at least this information, no executive can claim that that department is assisting him in controlling his production and expenditures.

The prime purpose of any cost system, or any method of arranging cost data, is that of aiding the man-

agement, either in reducing the cost or in making such adjustments or changes in the mills that will eventually add to his profit. **Cost systems or methods whichever you prefer to call them, should be nothing more or less than a sort of machinery for turning out quickly cost information that will be of practical benefit to those who are responsible for improving the quantity and quality of production and controlling the amount of expenses or the absorption of expenses in the mill.**

They should be devised and arranged largely upon the principle of exceptions, and instead of being arranged in such a manner that eventually they will gather together a great array of unmanageable facts, should be planned in such a manner that reports to managers or executives can be quickly prepared from them; reports that will clearly and unmistakably point out to them where unsatisfactory or unfavorable conditions exist.

This principle of exceptions that I have referred to is one of the most important principles that can be made use of in the manufacturing and business world. It was indirectly referred to a number of years ago by George Horace Lorimer. In his "More letters of a self-made man to his son," he gives us this bit of advice: "In the first place, you don't have to bother very much with the things that are going all right, except to try and make them go a little better, but you need to spend your time smelling out the things that are going all wrong and laboring with them until you have persuaded them to lead a better life." Mr. Lorimer brings out the fact that the attention should be concentrated upon the exceptional, irregular, or unsatisfactory facts of business and that the attention should be directed to the normal facts only to the extent of noting that they are normal. In cotton manufacturing, this would mean concentrating our attention, both from a textile and from an accounting standpoint upon the subnormal conditions or tendencies of production and upon the abnormal or unusual items of expenditures, and that little time should be spent in developing and examining into data concerning which it is apparent there is nothing unusual.

The manufacturer or executive's

interest in cost accounting is confined primarily to knowing how where these unfavorable, or unusual conditions exist, and in knowing how much these conditions, if overcome, would represent in a savings in dollars and cents. He will want to know regularly the following:

First: To what extent the separate production of each hank roving, yarn count, or cloth construction, etc., is falling below a normal basis of production. This basis would be the productive possibilities of the spindles, spools, looms, etc., as determined by the manufacturer himself or his plant superintendent, and from which a normal allowance is made for breaking, doffing, stoppage, etc.

Second: To what extent the payments for labor in each separate department, such as carding, spinning, spooling, warping, sashing, tying-in, weaving, etc., are exceeding a minimum or predetermined for the payment of labor. This basis might differ in each department and in each separate operation of each department, but would be in each case established, either by present conditions or by past performances. In the card room, the slubber, intermediates, and speeder tenders might be paid by the hank, while the balance of the mill hands in this department might be paid by the hour. The latter, however, would be rated for the purpose of getting a normal cost at so much per hank, and applied to the total hanks made on slubbers, intermediates, and speeders. In the spinning room, the spinners might be paid by the side, while the doffers and other mill hands in this department might be paid by the hour. The latter, however, would be rated for the purpose of getting a normal cost, at so much per side, and applied to the total number of sides operated by the spinners. In the weave room, the weavers might be paid by a fixed rate per thousand picks on each construction of goods woven; while the loom fixers and other helpers in this department might be paid by the hour. However, for the purpose of getting a normal cost, the latter might be rated at so much per one thousand picks and applied to the total number of picks made by the weavers. In each operation or department of the mill, it is not a difficult matter to fix a minimum or predetermined basis for the payment of labor and to determine to what extent there are departures there-

\*Of Geo. G. Scott & Co., Charlotte, N. C.



from in the actual payments of labor.

Third: To what extent there would have been an additional saving in labor and where that saving would have been made in each separate department of the mill if the normal production that was anticipated in each of these separate departments, and as determined in the first paragraph, had been realized.

Fourth: To what extent there would have been a saving, and where that saving would have been in the overhead items of salaries, insurance, taxes, etc., if the production that was anticipated on each group of looms, making a certain construction of goods, and as determined in the first paragraph, had been realized. The total normal overhead items for the purpose of control are rated at so much per loom per hour, and need not be considered in rela-

tion to any other department, except the weave room, where all the looms are the principal centers of production in the mill.

A cost accounting department may have made many duties to perform, but the most important duty that it can perform is that of giving this sort of information to an executive. The latter, while familiar with the various classes and amounts of expenditures, and who must receive this latter information in such a form as to enable him to connect it with what he has perceived in the mill by observing physical conditions.

In the past, I am inclined to think that the average mill bookkeeper has been spending so time in classifying his expenses, in distributing them to the various operations by widely different theories of allocation and in noting how

the different parts of his system are interrelated and reconciled with each other that he has acquired a bad habit.

He has acquired the habit of thinking entirely too much of the form and the structure of his accounting system, and in thinking too little of the purpose for which it was, or should have been, devised and the path into which it should be directed. The prime purpose of the cost accounting department, as I have already said, should be that of preparing and presenting cost data in such a manner that subnormal and unusual conditions of production, and exceptional or irregular conditions of expenditures will stand out clearly to the executive or manager and be an aid to him in securing a better and a greater production at a lesser cost.

I am of the opinion that there are

not more than a score of cotton mills in the State of North Carolina, whose plan or method of costing is arranged in such a manner that it can consistently assist an executive, or a mill superintendent, in "smelling out the things that are going all wrong," or can tell them what is the cost in dollars and cents of these unsatisfactory conditions of manufacturing that are constantly cropping out, as well as the causes that have given rise to them.

As mill executives, which of these questions would you ask your accounting department, and what knowledge would you want it to give you in respect to your mill operations? Would you just want to know how much you spent; where you spent it; and how much product you made, and what it cost you; or would you want to know how much you

(Continued on Page 34)

A	BASIC DATA 100% PRODUCTION	FILLING					TOTAL
		WARP No. 24	No. 12 $\frac{1}{2}$	No. 11	No. 8	No. 6 $\frac{1}{2}$	
	NUMBER OF SPINDLES OPERATED	5,181	1,912	55	102	1,223	8,473
	100% PROD. PER SPINDLE HOURS 110	2,685	5,705	7,414	11,827	14,556	5,220
	100% PRODUCTION—POUNDS	13,910	10,907	407	1,206	17,801	44,231
	ACTUAL PRODUCTION	11,447	9,680	352	1,008	15,180	37,667
	PRODUCTION PERCENTAGE	82.28	88.75	86.49	83.58	85.27	85.15

B	BASIC DATA STANDARD PRODUCTION	FILLING					TOTAL
		WARP No. 24	No. 12 $\frac{1}{2}$	No. 11	No. 8	No. 6 $\frac{1}{2}$	
	NUMBER OF SPINDLES OPERATED	5,181	1,912	55	102	1,223	8,473
	STAND. PROD. PER SPINDLE 90% 110 HRS.	2,416	5,134	6,673	10,544	13,100	4,698
	STANDARD PRODUCTION—POUNDS	12,517	9,816	367	1,086	16,021	39,807
	ACTUAL PRODUCTION	11,447	9,680	352	1,008	15,180	37,667
	BELOW OR ABOVE STANDARD	1,070	136	15	78	841	2,140

C ACTUAL BASIS			
YARN NO.	ACTUAL PRODUCTION	POUNDS PER SPINDLE	SPINDLES OPERATED
24	11,447	2.209	5,181
12 $\frac{1}{2}$	9,680	5.062	1,912
11	352	6.400	55
8	1,008	9.882	102
6 $\frac{1}{2}$	15,180	12.412	1,223
TOTAL	37,667	4.445	8,473

D STANDARD BASIS				PRODUCTIVE LABOR		NON-PRODUCTIVE LABOR		TOTAL		SPINDLES IDLE IN EXCESS OF NORMAL ALLOWANCE
YARN NO.	ACTUAL PRODUCTION	POUNDS PER SPINDLE	SPINDLES RUN FULL TIME	LABOR RATE PER SPINDLE	LABOR COST	LABOR RATE PER SPINDLE	LABOR COST	LABOR COST	COST PER POUND	
24	11,447	2.416	4,737	.02225	105.39	.06222	294.73	400.12	.03495	444
12 $\frac{1}{2}$	9,680	5.134	1,885	.04004	75.56	.06222	117.28	192.84	.01992	27
11	352	6.673	53	.04009	2.12	.06222	3.29	5.41	.01536	2
8	1,008	10.544	95	.04009	3.80	.06222	5.91	9.71	.00963	7
6 $\frac{1}{2}$	15,180	13.100	1,158	.05906	68.39	.06222	72.05	140.44	.00925	65
TOTAL	37,667	4.751	7,928	.03219	255.26	.06222	493.26	748.52	.01987	545

### SPINNING ROOM

(Asterisks represent either departures from normal or savings that might have been affected if normal production had been realized.)

E	OPERATIONS		ACTUAL PAY ROLL	STANDARD PAY ROLL				VARIATION
				ACTUAL UNITS				
				NO. OF HRS.	NO. OF WEEKS	STANDARD RATE	STANDARD PAY ROLL	
WARP SPINNERS WARP NOS. <u>24</u>	DAY	90.53	411		.21	86.31	4.22	
	NIGHT	30.36	138		.21	28.98	1.38	
	TOTAL	120.89				115.29	5.60	
FILLING SPINNERS FILLING NOS. <u>12-11-8</u>	DAY	60.92	174		.34	59.16	1.76	
	NIGHT	24.50	70		.34	23.80	.70	
	TOTAL	85.42				82.96	2.46	
FILLING SPINNERS FILLING NOS. <u>62</u>	DAY	55.37	123		.43	52.89	2.48	
	NIGHT	20.25	45		.43	19.35	.90	
	TOTAL	75.62				72.24	3.38	
NON-PRODUCTIVE LABOR	DAY	378.69	708		.50	354.00	24.69	
	NIGHT	198.12	253		.60	151.80	46.32	
	TOTAL	576.81				505.80	71.01	
OVERSEERS		21.45			21.45	21.45	-0-	
TOTAL NON-PRODUCTIVE		598.26				527.25	71.01	
TOTAL LABOR		880.19				797.74	82.45	

Period

Week Ended 11-20, 1926

F VARIATION BETWEEN ACTUAL AND STANDARD LABOR COST			
	POUNDS	PER POUND	AMOUNT
ACTUAL PAY ROLL (SEE FORM E)	37,667	.02336	880.19
STANDARD PAY ROLL (SEE FORM D)	37,667	.01987	748.52
VARIATION	37,667	.00349	131.67

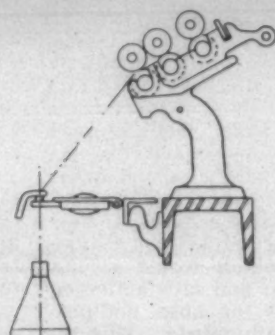
G CAUSES OF VARIATION BETWEEN ACTUAL AND STANDARD LABOR COST					
		IDLE SPINDLES	RATE	PRODUCTIVE LABOR	TOTAL
ABOVE NORMAL	PRODUCTION		.02794	15.23	
BELOW NORMAL		545	.06220		
DECREASE					33.99
INCREASE	IN AMOUNT OF LABOR				82.45
TOTAL VARIATION					131.67



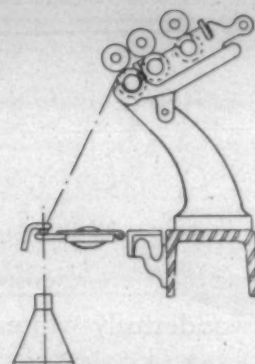
# SACO - LOWELL

LARGEST MANUFACTURERS OF TEXTILE MACHINERY IN AMERICA

## LESS ENDS DOWN



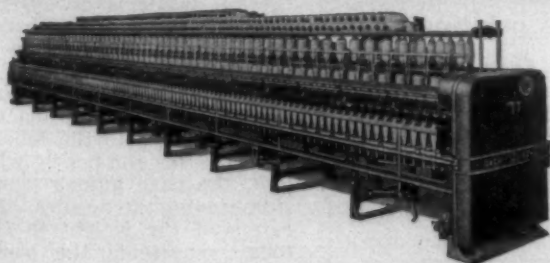
Old Style Roll Stand  
50° angle between  
thread guide and yarn



New Style High Roll Stand  
68° angle between  
thread guide and yarn

OUR NEW HIGH ROLL STAND  
Decreases the Strain  
on the Yarn

Careful Attention to Details Helps to Make  
**SACO-LOWELL SPINNING FRAMES**



The EASIEST and CHEAPEST to Operate

*It Pays to Install Modern Machinery*

## SACO-LOWELL SHOPS

NEWTON UPPER FALLS, MASSACHUSETTS

SOUTHERN OFFICES

CHARLOTTE, NORTH CAROLINA

GREENVILLE, SOUTH CAROLINA

ATLANTA, GEORGIA

FOREIGN SALES DEPARTMENT, NEWTON UPPER FALLS, MASSACHUSETTS, U. S. A.

When you paint WHITE, use Zinc-O-Lith



—and you'll paint with GENUINE ECONOMY. You'll make savings in first costs—for Zinc-O-Lith saves by its exceptional covering capacity, by its great hiding properties, and its ease of application. You'll make continuous savings—for the wonderfully white, fine, smooth surface of Zinc-O-Lith maintains its high reflective power over a surprisingly long period of time.

And Zinc-O-Lith savings can be multiplied by three—for this better kind of paint for the textile industry is made in three types—Zinc-O-Lith Enamel—Zinc-O-Lith Flat—Zinc-O-Lith House Paint. Glidden men in your district will gladly furnish additional Zinc-O-Lith information, help solve your painting problems and make paint savings for you.

#### THE GLIDDEN COMPANY

National Headquarters  
CLEVELAND, OHIO



Zinc-O-Lith spreads daylight everywhere

## Knitting of True Rib Fabrics

Lecture by Walter Larkin, of Fidelity Machine Company, at Textile Conference, N. C. State College, Raleigh, March 4.

IT has been said that "necessity is the mother of invention." This old saying certainly applied to William Lee of Woodboro, a suburb of Nottingham, England. In the year of 1589, Lee, who had married outside of his social scale, found himself faced with the real task of earning his own living in addition to that of a young wife. As he pondered on various methods of working out his problem as his wife sat knitting, the idea occurred to him that a machine might be produced for making knitted fabric. As a result of Lee's great necessity to obtain definite results, he actually did develop and build a machine which knitted plain fabric.

This first fabric produced on one set of needles, which is the same principle on which so many fabrics are still made today, met the need of his day for the time being. As the people became more familiar with the advantages of the knitted fabric, especially for hosiery, they also appreciated the need of a more elastic stitch which would give a standard of wear and satisfaction on certain parts of the hose, not possible with a plain fabric. This requirement brought forth a machine with a double set of needles which were set at an angle, one to the other, drawing their loops opposite each other. In the single set of needles the fabric has not the required formation to allow the uniform give and return; whereas, on the rib stitch made with two sets of needles, the double stitch gives an effect comparable with that of an accordion. This principle, developed in the year of 1758 by Jedediah Strutt, has stood the test to this day, and particularly in men's half hose and in the fancy cuffs which are so popular on children's and men's golf hose, the rib fabric is always demanded when the individual becomes familiar with the difference in character of the two fabrics.

The first method of producing true rib was on a flat top machine with a weight hung to the fabric to pull it away from the needle while being knit, the yarn guided from side to side, feeding the needles. The application of the weight to the fabric today represents the basic difference between fabrics known as true rib made on two sets of needles and rib fabrics still made on the two sets of needles and rib fabrics still made on the two sets of needles but without the necessary accurate and uniform pulling action.

More speed being desired, the two banks of needles were placed; one in the cylinder, the other in the dial. Set thus at right angles to each other, the yarn passed around the cylinder feeding the needles in one continuous rotary motion and adding greatly to the output of the machine. This brought the need of casting aside the original weight hung to the fabric. In its place rollers gripped the fabric being driven by the machine, keeping a constant weight to pull the work from the needles. Because of the variety of knitting machines which have since been developed of the work from the needles, veloped to give this accurate pull-

the present day ribber is developed. The function of the pulling mechanism, known at the present time, as the take-up, is very important, and the need has developed a mechanism extremely accurate. There are, of course, several different types of take-up mechanism which may be classified under the type that operate by the worm and wheel and the other by means of planetary gearing. The latter has the advantage of being incased in dust-proof enclosure, allowing the application of a constant bath of lubricant, making a very sensitive mechanism requiring no attention and doing its work perfectly.

The building of the round frame, as it is called, has not changed the functioning of the needles as they are operated in relation to each other as in the beginning, but produce a tubular rib in place of flat fabric.

The tubular rib, being fitted for hosiery, brought forth many ideas, both in the fabric and methods of functioning the needles to produce various effects. However, the smooth, even true rib of very fine textile is in great demand and making of this grade calls for a high state of development on the part of the machine, as the needles must act in just the right relation; all to draw the same amount of stitch; all the same length and size of hook to prevent lines along the wales; the yarn must give the same amount of tension at all times to prevent rings around the fabric; the needle cams smooth and at the right angle so as not to cause the needles to vary the length of their stitches. These are some of the things necessary to give the proper results.

The holding of the dial and cylinder needles central with each other, to prevent their rubbing together, was by the use of lugs, or dogs, on the lower side of the dial, striking corresponding lug on the inside of the cylinder, with the fabric being pulled down between them. This made an objectionable line on the face of the fabric. To prevent this, there were created other ways of holding the dial and cylinder; this, giving free passage to the fabric all the way round. This gave the name of dogless to this type of machine. These attachments have developed step by step, being simplified by getting rid of their vibrating parts, until now one is used with but one rotary part. This gives extreme simplicity and adds to the life of the machine.

For further speeding up the production, the machine has been equipped with an automatic speed changer, driving it at lower speed while knitting certain parts, then speeding up again. This addition has proved of great value. With the improvement in hosiery, came the need of making different effects known as the tuck stitch, selvage well, French welt and drop stitch, and all of these effects have been taken care of by mechanical attachments operating automatically from

(Continued on Page 35)





# A general-purpose motor that stands the gaff!

**L**INE shafts, group drives, fans, pumps—all are types of drives that come within the scope of this Fairbanks-Morse "general purpose" motor—the Type H—a *ball-bearing* motor that gives the same superlative service that the motor maintenance man has learned to expect of F-M *special purpose* textile motors.

Here is a motor with grease-packed ball bearings—coming to you ready to serve a full year without further lubrication. Thenceforth, greased *only once a year*—the greasing, a simple job of a few moments. And that is practically the only attention required. Spoilage, oil-smeared floors and oil-sopped frames are entirely eliminated.

Moreover, you save the cost of the "endless march of the man with the oil can"—the attendant of the sleeve-bearing motor.

The exceptional stamina of the Type H—both mechanical and electrical—is a characteristic particularly valuable on applications where peak loads and mechanical strain cannot be predetermined with certainty. One-piece rotor winding; rigid, broad-footed frame; liberal copper values of coils; balanced, sturdy construction throughout. These are other qualities which, summed up, make the Type H the nearest possible approach to the truly "abuse-proof" motor. Write today for bulletins.

FAIRBANKS, MORSE & CO., Chicago

Manufacturers of Electrical Machinery, Oil Engines and Pumps

Textile Mill Branch, 1216 Johnston Building, Charlotte, N. C.

## FAIRBANKS-MORSE

*Pioneer Manufacturers of*

## ball bearing motors

### Fairbanks-Morse Textile Motors

General-purpose motors

Motors for opener and picker rooms

Two- and four-frame motors

Universal two- and four-frame motors

Individual drive motors for looms

Individual drive motors for spinning frames and similar service



# Spinners' Meeting Discusses Defective Yarn

THE meeting of the Spinners' Division of the Southern Textile Association, held at Union, S. C., last Wednesday, was devoted to a discussion of the causes of uneven yarn and other questions on spinning. The discussion proved very interesting and practical and the meeting was one of the most successful that the spinners have held.

Carl R. Harris, chairman of the division, presided. In opening the meeting Mr. Harris thanked Superintendent Jones, of the Union-Buffalo Mills, for having made the arrangements for the meeting.

Mr. Jones then asked T. M. McNeill, superintendent of the Monarch Mills, to make the address of welcome.

Mr. McNeill, in a few words, expressed the pleasure of having the meeting in Union and stressed the value of the work that the Southern Textile Association is doing through its divisional meetings.

Mr. Harris stated that the information based on the questionnaires sent by him to the members of the Spinners' Division was being condensed into chart form for the information of the members.

My idea, he said, today is to give you an opportunity of seeing that chart of information and taking what you like of it of any particular number that is based on what you are running, and later of course to get that out in the proceedings so that everybody will have an oppor-

tunity of getting all the information there is to it, and I want to follow that up still more, and would like for any of you who have not done so to send in your questionnaire and would like to complete all of it we can, for it is very good stuff, and my idea today is we have, as you know for the last few meetings, got into the discussion of the different rings, spindles and machinery as a whole, but I thought today that we would just get together for a good old time discussion of you might say spinning room management, of everyday problems that come up in the spinning room, thin places in yarn, cleaning, overhauling, and that kind of thing. I think it would do us good to devote this meeting entirely to discussions of that kind, and I am sure all of you have questions along that line that you would like to have discussed and when we get started I would like for every man to get right into it and keep the thing going. I have not prepared a set form of procedure but I knew we could get to talking of spinning room problems and talk all day. Of course it is essential that we devote some time to rings, etc., especially that it would give anybody figuring on buying new equipment an opportunity to compare different equipment, but we have done a good deal of that, and I think we should go back and review things we come in contact with every day. I have a number of swatches of cloth here

that I would like to pass out and I want you to study these pieces of cloth and pick out any defect that you think could be laid to spinning, and later on we may check off a list of these things and discuss means and methods of overcoming them. There is some stuff in those pieces that I know some of the mills would like to get rid of, and if there is any way you can suggest to do it, it certainly would be appreciated. While we are waiting on that the first thing I would like to have as many causes for uneven yarn that is in the spinning room as we can get. How about just starting here and give us a list of the causes that you happen to think of and discuss those points after we get a list of them? Mr. Lockman, how about some of the causes?

John S. Lockman, Lockhart: To begin with, dry rolls will cause uneven yarn as will any kind of foreign lint going into the yarn behind the roller. Lint catching on the yarn will make uneven yarn. If the back saddle is not properly set in its place, or if the stirrup gets out of the saddle and rides out on the roller, it will make uneven yarn. In cleaning, if you get lint on the roving or yarn, uneven yarn will result. Anything that prevents the rolls running freely, such as saddles being worn, ends of rolls being worn, roll bars worn, lap being worn to such an extent as to let them down and not get the proper weight, or

anything else that would retard the rolls and kept them from turning freely causes uneven yarn. The same thing occurs when cotton gets between any of the steel rolls or the back one gets to the point where it will nip off the yarn. We can go into some of the finer points, such as uneven yarn being made by travelers that are worn sharp enough to cut or chafe the yarn or cause it to become hairy. With very fine yarn, we will hardly have that trouble, for when the traveler is worn sharp enough it comes off. The traveler will not cause unevenness except in very coarse yarn as mentioned above. Any lint that gets into the roving and catches on the rolls, or catches on the roving after it has gone through, makes uneven yarn, but there is very little of that. In such cases, you can almost take a blow pipe and blow the lint off, though I do not believe that you can get two hands on a side that will pick up the cotton.

Mr. Harris: Mr. Wickle, what do you think?

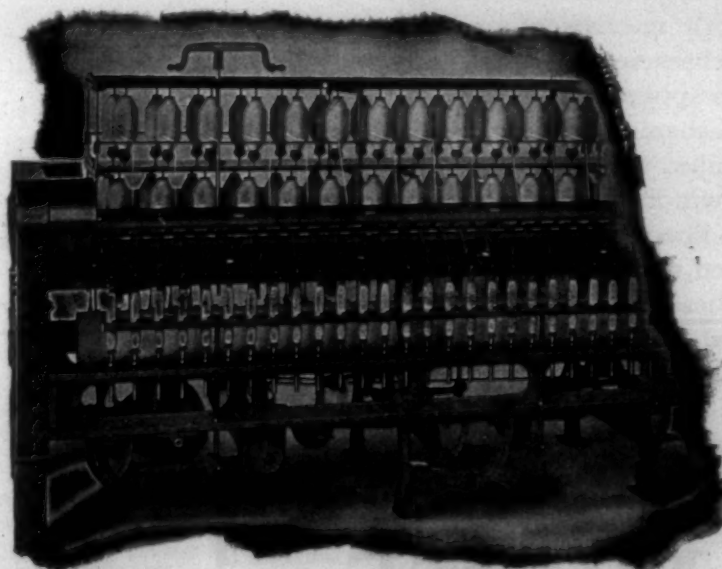
J. B. Wickle, manager Consolidated Textile Corporation, Shelby, N. C.: Some of the things that we have tried to do to prevent uneven yarn are as follows: Put laps on the card so that they will break down the end by the time the cap has gone through. Another thing that we have tried is keeping the roll

(Continued on Page 16)

## H & B AMERICAN MACHINE CO.

Pawtucket, R. I.

Southern Office: 814-816 Atlanta Trust Co. Bldg., Atlanta, Ga.



Builders of

### Improved Spinning Frames

Band or Tape Driven

The illustration shows the Head End Section of our Improved Spinning Frame, with New Pattern Builder and Pick Motion. Our machines are of Extra Heavy Construction to withstand high speeds without vibration, thus insuring light running and reduced cost in operation.

We build these machines in all gauges, with either Lever Weighted or Self Weighted Top Rolls.

There are many valuable features embodied in our machines that we would be glad to describe.

Illustrated Bulletin with List of Users sent on Request

## COTTON MACHINERY



# Link-Belt Service Records

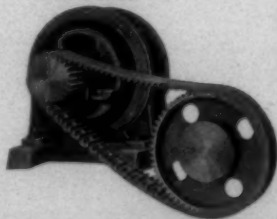
## In Southern Mills—10 Years Ago



The American Spinning Company, Greenville, S. C. J. E. Sirrine & Co., Engineers

### Textile Machines Driven with Link-Belt Silent Chain:

Cards  
Drawing Frames  
Roving Frames  
Slubbers  
Intermediates  
Silver Lappers  
Ribbon Lappers  
Combers  
Ring Spinning Frames  
Twisters  
Mules  
Spoolers  
Winders  
Looms  
Mercerizing Machines  
Dyeing Machines  
Printing Machines  
Tenter Frames  
Calenders  
Line Shafts



**T**EN years ago 184 Link-Belt Chains gave the American Spinning Company's mill the production of 11 extra spinning frames—an added production of 6%, that has continued year after year with no extra expense whatsoever.

The success of the change to Link-Belt Silent Chain Drives—made in 1917—is simply evidenced by the following statement from Superintendent T. A. Sizemore:

"The individual drive enabled us to get rid of belts—and anxiety—at the same time. So we purchased 184 Link-Belt Silent Chains for driving our spinning frames.

"It is conservative to estimate that our

production has been increased 6%, due to the elimination of belt slippage. Moreover, it has continued uninterrupted from this point, for the past 10 years. This is really the equivalent to saving the production of 11 extra frames yearly."

Other advantages to their factory, thru the use of Link-Belt Drives, according to Mr. Sizemore, are: better light; more pleasant working conditions; and a smooth, steady speed, resulting not only in the reduction of breakage, but also in an improved quality of yarn.

Is your equipment equal to that of other successful mills? In checking up send for a copy of our Silent Chain Textile Book No. 625.

### LINK-BELT COMPANY

Leading Manufacturers of Elevating, Conveying and Power Transmission Chains and Machinery  
CHICAGO, 300 W. Pershing Road  
Atlanta  
511 Haas-Howell Bldg.  
INDIANAPOLIS, P. O. Box 85  
Dallas, Texas  
1221 Mercantile Bank Bldg.  
Charlotte, N. C., 908-910 Commercial Bank Bldg.  
PHILADELPHIA, 2045 Hunting Park Ave.  
Birmingham, Ala.  
229 Brown-Marx Bldg.

3018

# —LINK-BELT—

## SILENT CHAIN DRIVES

# INSTITUTE FOR RESEARCH *Development of New Principles in Ring Traveler Construction*

IN appearance before a body of technically trained men, dealing with a complex subject, I feel somewhat embarrassed and realize my limitations to the fullest extent. My fundamental points, however, have been proven both in practice and in science, therefore, I feel sure of my ground in this respect. Otherwise, I am obliged to beg your indulgence and kindest consideration.

Ring spinning will have its one hundredth anniversary in 1928, because the traveler was invented in that year by John Thorpe, of Providence, R. I. With Thorpe's revolutionary invention began the passing of the throstle frame, and was to eventually supersede the mule in all but very fine numbers. It would be possible to dwell at length upon the ring frame as a whole, to describe the old masters who devoted most of their lives to perfect this now indispensable process of cotton manufacture, but as the purpose of this short paper is to treat especially with ring travelers, we will hasten to the subject.

It is a recognized fact that the traveler is the instrument which measures spinning limitations, i. e., the endurance of the spindle, the ring and other essentials is far greater than the endurance of the traveler because they are much larger mass and do not perform under so great a strain. In addition to the responsibility of twisting and guiding the yarn on the bobbin, the

Address by Phillip C. Wentworth, treasurer National Ring Traveler Co., before Spinners' Division, Southern Textile Association.

traveler is forced to withstand the hostile attacks of two invading elements, viz., friction and centrifugal force. Friction, being a penetrating heat, inflicts its vengeance upon the steel structure of the traveler at the bearing point on the ring, while the centrifugal force is the agent which leads particles of lint, loosened by the friction slyly under the bow of the traveler to lodge in the vacuum and destroy the accuracy of weight, greatly multiplying air resistance and also effecting the weight of yarn in relative proportion. In addition to this, loading is one of the chief causes of thick and thin places. In view of these well known facts it is agreed that the only way to more intensify spinning is to increase the stability of the traveler and this can only be accomplished by a more scientific process of heat treating. Inasmuch as the traveler in regular style has a uniform amount of material from horn to horn, and must be in temper in order to be applied to the ring, it is drawn to a temper condition throughout. A way to change the heat treating condition has been brought about by removing some of the material at the bow; not an easy task to perform mechanically; however, it has finally been successfully accomplished by de-

signing and building new machinery at a material cost not only in money, but also in the expenditure of inventive effort and mechanical ingenuity.

When tempering a traveler in this new form the heat acts more quickly at the point of removal and the temper flows to the vital point, top of the bow, for the same reason that twist runs to a thin place in the yarn. The steel structure at the bearing point, or horn, is left materially harder than a spring temper condition. This hard steel structure at the horn results in greatly enhancing the stability and endurance of the traveler to meet its exacting and arduous duties. The life is not only multiplied by two, but the wear on the ring is reduced to a minimum by less frictional contact and its period of service must necessarily be prolonged.

It has long been recognized that the ring traveler in its regular shape in an instrument very much out of balance, in that an opening is left between the horns called the "flange," and the traveler itself is not a true circle. The result is a top heavy affair with the center of gravity well above the geometrical center. We believe that this is one of the reasons for the unevenness

of wear on the spinning ring, also, one of the chief causes of rings wearing "wavey." These defects of the traveler have received more recognition in England and Germany than in the United States, the home of ring spinning, and furthermore, the greatest ring spinners in the world. Attempts to overcome this unbalanced condition have been made by engineers in the above mentioned countries, by folding over the horns. These attempts to lower the center of gravity have not proved beneficial for the reason that it has required a greater length of material to make any given weight of travelers, and as traveler weights are constant, this has resulted in the use of a smaller gauge wire which has rendered the traveler weaker and less staple. Therefore, ideas of this character have never come into common use or progressed beyond the experimental stage. The removal of material at the bow of the traveler has not only completely revolutionized the heat treating condition but the center of gravity has unquestionably been lowered to a point nearer the geometrical center. This important point was not realized until the rotostat was brought into use for research purposes. The rotostat is a machine which can be placed in front of a spindle in operation, and its speed so synchronized that the spindle and the traveler have the appearance of

(Continued on Page 31)



## Staley Textile Starches

*Modified and Standardized for specific requirements*

STALEY'S ECLIPSE MILL STARCHES	Thin-boiling Starches for Warp-Sizing and Finishing.
STALEY'S RADIO MILL STARCH	For Heavy Sizing and Stiff Finishing.
STALEY'S ANCHOR PEARL STARCH	Thick-boiling Starch, re-washed and re-bolted for Sizing and Finishing.
STALEY'S STAYCO GUM	For Bright Colored Warps or Fabrics, Rayon and Special Finishes.
TEXTILE CORN SYRUP	For Khaki, or White Goods.

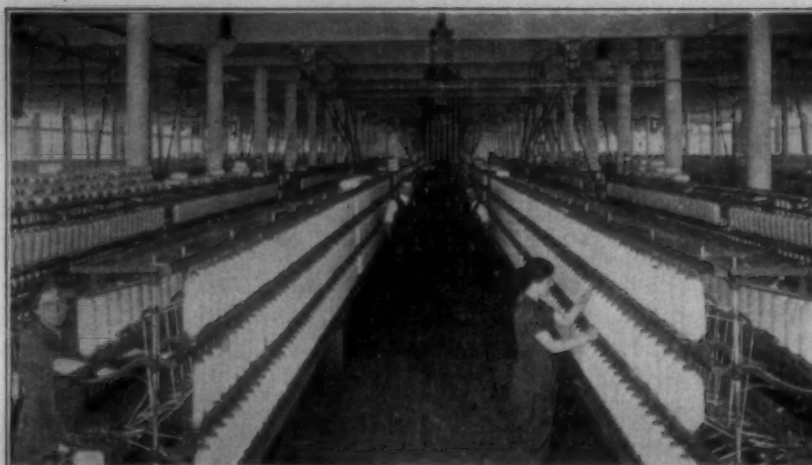
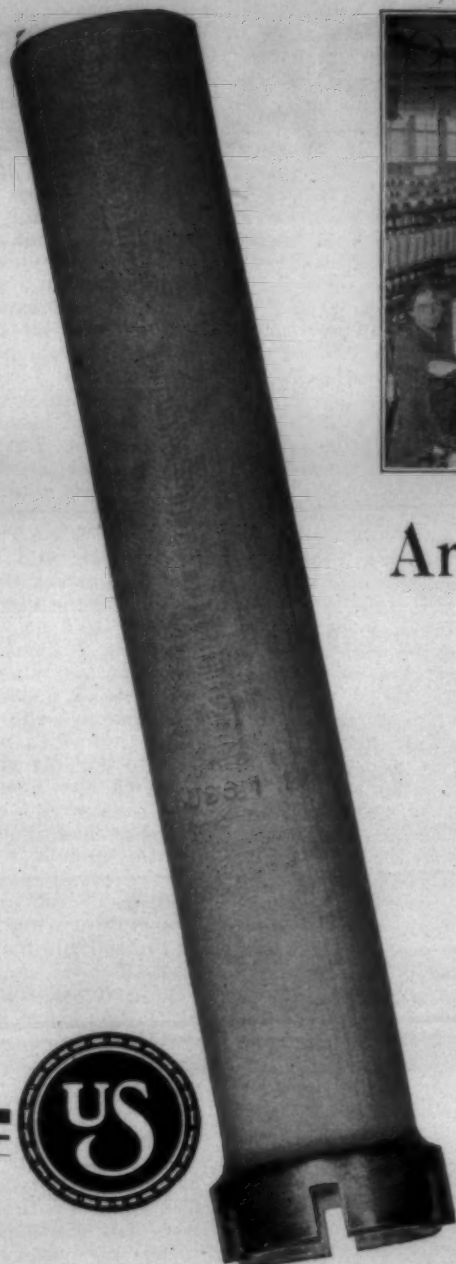
*Note: Our textile service men are available subject to your call to assist in your problems*

**A. E. Staley Manufacturing Company, Decatur, Illinois**

828 Montgomery Bldg., Spartanburg, S. C.  
J. W. Pope, Ansley Hotel, Atlanta, Ga.

25 Church St., New York  
88 Broad St., Boston





Roving Frames in the Crown Manufacturing Company, Pawtucket, R. I., one of the best yarn mills in the country, completely equipped with U S Products

## Are You Using Uniform Bobbins?

**Y**OU'VE seen your carder and spinner produce weak and uneven yarn on off-size bobbins and you know what it has cost you in waste and seconds. You want uniform bobbins. In fact, you must have them if you are to produce strong, even yarn and get the highest production from your mill.

Any number of manufacturers will give you general statements about the accuracy of their bobbins, but what you want is a definite guarantee of uniformity.

U S Card Room Bobbins are guaranteed to definite degrees of accuracy. Speeders 6", 7", and 8" traverse, are guaranteed not to exceed .0116, and Intermediates and Slubbers, 9", 10", 11", and 12" traverse are guaranteed not to exceed .0156 either side of the diameter specified.

Our bobbins are further guaranteed to be made of the best obtainable grades of Hard Maple, Birch, or Beech, according to your order. Birch and Maple are not mixed because they cannot be turned uniformly, and bobbins made in this way cannot meet the U S tests for Accuracy and Uniformity. We do not use Gumwood or porous, coarse-grained woods that will not give satisfaction.

### U S Tailor-made Skewers

Do your skewers collect quantities of lint? Do they wobble? Do they fit your bobbins as they should—or shouldn't?

If you want a real good skewer, send U S a sample of what you are now using and a sample bobbin the skewer is to fit.

Your U S skewers will be accurately made to your individual specifications and smoothly finished.

**U S Uniform Card Room Bobbins are made right in Greenville, S. C., under the supervision of Eastern factory men. Check up on your present equipment for variation, and order a new lot of these Guaranteed Bobbins today**

Main Office:  
Providence, R. I.

Branch Offices:  
High Point, N. C.  
Philadelphia, Pa.  
Atlanta, Ga.

**U S BOBBIN & SHUTTLE Co.**  
GREENVILLE, S. C.

**BUILDERS OF BETTER BOBBINS, SPOOLS, AND SHUTTLES**

## Spinners' Meeting Discusses Defective Yarn

(Continued from Page 12)

necks in good shape. I have a scheme to keep up with roll necks. On each frame I number every neck and then look them all over. Where they are on good condition, I check them out. Where they are in poor condition I mark them with a B showing the neck needs attention. In that way, we have a record of every roll in the mill. I think a bad roller necks get you more poor yarn than anything else and where you piece up on slubbers, the way you balance the knock-off on the drawing makes it. If it knocks off so that the fibre breaks when you put up the neck, then you have a thin place in the yarn. If you have the knock-off balanced, you have the proper sized strand.



**CARL R. HARRIS**  
Chairman Spinners' Division  
Southern Textile Association

W. T. Morton, Newberry, S. C.: If you go into the things that would cause uneven yarn you would have to start back at the opening room, and to take up just the spinning, confines the matter to just a few things in the spinning room. Among the causes of uneven yarns are lumps of cotton around the skewers in the creels stretch the roving and cause uneven yarn. The stirrups rubbing against the steel rollers wear the rollers to where they become fluted on top. One of the primary things in the spinning room is the roller necks. Where the roller has the tendency to wobble as it goes over you will find uneven work. The travelers get worn and rub the yarn, causing it to look fuzzy. A lump of cotton going on the rolls or lumps catching between the saddle and several rollers would cause unevenness. These are just a few things I think about.

Smith Crowe, Drayton: Most of the things that can cause uneven yarn in the spinning room have already been mentioned, with perhaps one or two other things. Roller setting has not been mentioned. Especially where the metal rollers have been weighted on the spinning frame it can cause it either by too close or too wide setting. One other thing is uneven tension of bands on spinning frames. That does not make the yarn delivered at the front of the creel uneven, but it does cause slack twist in places—the bands may slip a little bit and wherever it slips that causes slack twist and that goes as a cause of

uneven yarn. Another thing that will cause uneven yarn on a spinning frame is a great deal of vibration in the spinning frame and if when the frame is stopped the floor vibrates very much, the roving will slack off just a little in the creel, and a great many times when the frame is started up it will run through double an inch or possibly two inches, and that will cause uneven yarn. That is about all I have in mind at this time in addition to what has already been mentioned.

Mr. Harris: Is there anything we have overlooked? Mr. Bagwell, can't you add something?

A. F. Bagwell, Gendale: These gentlemen have about covered the ground, I think. I might add a few things. We might say the roving is uneven to start with. Improper twist—of course, the more uneven it is and the more twist you put in it the more uneven it will become. Variation in spindle speeds will cause it, and as Mr. Crowe mentioned the bands have something to do with it. Just a day or two ago we had an experience with a piece of goods that we were making. We wanted the piece of goods to break practically the same both ways. After putting a second filling frame on this number of yarn which averaged about 8s it broke about fifteen pounds stronger than the old frames which had been on for some time. Upon investigation we found that this frame had more twist in it, yet had a lower spindle speed than the higher speeded spindle frame. After speeding the spindle up to the second frame, it had a tendency to lighten the yarn and of course lessened the twist and the strength jumped up to about fifteen points. In other words, taking off a twelve-inch pulley and putting the smaller pulley increased the breaking strength about fifteen pounds and made the yarn look more even and uniform.

We have quite a difference in the benefit of twisting roving. We must have enough to keep it from stretching, although I think too much twist is as bad as not enough.

Mr. Waldrop, Drayton Mills: In setting the top roller and the steel roller, I find in changing that if I set the top roller direct over the steel roller the top roller will bounce from one flute to the other, and in doing so will cause thin places places to appear in the yarn, and the roving is stretched, as Mr. Bagwell has said. I also find the creel rods under tension will jerk the roving and make uneven places, and will also cause it to kink. When the frame is started running on loose pulley and a tight pulley not balanced will cause these heavy places to come in.

Marshall Dilling: One thing has not been mentioned that may be of importance with some of the mills with older machinery is that when renecking the rolls in driving the square into the socket you are liable to swell it 1-64 of an inch, and that may cause that neck to be a little too large. That would not make thick and thin places, but would make that yarn finer than the adjoining end, and that would make the appearance in the cloth uneven.

If it is not put in true, the eccentric motion will not make a thin place, but will make another number of yarn, sometimes one-half and sometimes a whole number. New machinery is not so apt to have that as old machinery.

Chairman Harris: Mr. Wofford?

Mr. Wofford, Inman, S. C.: Breaking out roving in running two or three strands of roving sometimes six inches, sometimes four inches. The rest of it is about as Mr. Lockman says, but we make a lot of uneven yarn in the spinning room when we have good roving to start with.

A. L. Mills, Pelzer Mfg. Co.: I think the ground has been pretty well covered but there are two other things I wish to mention, one is draft and the other is cotton accumulating over the front roll and hanging down and catching on the yarn. Quite a lot of lumps showing in the yarn in that way, and I find it especially so in using the calf skin rollers.

H. M. Mitchell, Union, S. C.: We have overlooked one very important cause of uneven yarn on the spinning frame—that is where your front steel roller flutes becomes worn and slick and don't grip the roving as securely as a roller with deeper flutes or better rolls.

Chairman Harris: Mr. Jones, can you give us any information?

Mr. Jones, Union, S. C.: I do not know that I can give you any information on the cause of unevenness other than what has been mentioned, but we have recently had some experience in necking old spinning rolls, and call attention to the quality of steel that is used in making the necks. The average shop in renecking steel rollers or the man journeying around the country doing that work either use poor or cold rolled steel. We had about one hundred necks fixed with that and they lasted a very short time. It is better to use a steel with a higher percentage of carbon—we have used a great deal of it, and find it satisfactory, and any one renecking old spinning rolls should find out what steels should be used. The person who is renecking the rolls is going to put up a howl about using it, for it is slow, but I would say use because it will last longer.

Peter Quinn, Atlanta, Ga.: I advise case hardened joints—only trouble is it is pretty slow in working. You cannot take an old roll and make a new roll. The only solution is to put in a brand new roll with a case hardened joint and you have something that will last a lifetime.

W. T. Britton, Spartan Mill: I do not know that I can talk about uneven yarn—I have made more than anybody else. (Laughter.) I think the first experience I ever had about making uneven yarn was from a chattering roll. If you mix waste irregularly you are going to have uneven yarn, and if you have some mixed staple cotton you are going to have uneven yarn. The theory about cotton is that the short fibers slip back and when a bunch of that short fiber gets going it slips back. These mechanical defects, we all have them, and carelessness, but what made me think about the chat-

tering roll was that I was West and had charge of carding and spinning, and had all kinds of trouble about uneven yarn. They had had two or three men there before me. After being there a week or two I asked "What did the last man leave here for?" "He said he didn't like the town." I said if this thing don't get better there is another fellow going." I could not fathom the trouble, and sent some to my father, and he wrote me back it was poor lubrication on the frames. I said, Well, the old man used to be a good carder, but he has forgotten the game. He told me to get some oil so I thought I would try that and we had a solid front roller and I put that on there and it wiped that trouble out, right away, and the fibre was a great deal more even than in this cloth I am holding. It was just the lubrication, and that held my job. That impressed me very much, and I think that poor lubrication and the mixtures of the stock and the kind of stock you put in your mill has as much to do as anything I know. One thing has not been mentioned that I had trouble with a good many years ago, and that was the use of poor roller felts, and when we had the vibration so that the kinks came through or with any hard twisting roving, the rolls would be spoiled, and if the felt just under the cot is not elastic enough to come back the roving would make a short indentation in the roll and as the traveler brings the roving in the high places in the roll you may get uneven yarn from that.

J. R. Wikle, Shelby, N. C.: Calumet Machinery Steel of Crucible Steel, Pittsburg, makes the best we can get for rollers.

Chairman Harris: Is there anything we have not covered in the cause of uneven yarn in the spinning room? Can anybody give us any more points? We have named a number of things here, and we have not discussed very much the means of overcoming these things. We have here for instance slack bands where we are unfortunate enough to run bands. What kind of system have we to overcome the problem of loose bands causing bad yarn?

J. R. Wikle: If we saw loose bands once a week when we went around to see about them we would cut them off and put them on again.

Mr. Lockman: I do not have any system except tie them on as they come off. That is about all I ever knew that was any account.

Chairman Harris: That is one thing we have to do. As Mr. Wikle says there is some system of inspecting and catching bands before they come off, and I think that is a good idea.

Mr. Lockman: I have tried that and a good many other things, and I have found that if you get a band that is the right weight and size, and made out of the right kind of stuff, you are not going to have any slack bands—when that band gives way it falls off.

Mr. Waldrop: We have no system of checking up on slack bands, but we do require the doffers when he finds a soft bobbin to flag that



## Spinners' Meeting Discusses Defective Yarn

(Continued from Page 17)

er or under the front roller I can not decide.

Mr. Lockman: The way I see it is this: It has got to be a long and a short fibre together, and it is impossible for it to get its twist before it goes through the front roller, and I believe that the long fibre from the middle and the front roller is holding it under the front roller, gets hold of it and it has its twist just after it comes through the front roller. It is impossible to twist it between the middle and front rollers, and this long fibre comes through just enough to twist up and make that large place which draws it up. You can take the cockled yarn in your hand and it is that one fiber is longer than the other, and you can see what makes cockled yarn. This middle roller turns it loose in time to come on with the rest of the fibres after it has made that cockled yarn. It is bound to get its twist right in front of the front roller, where it is delivered. The middle roller still holds and the front roller gets hold of it, and it has got to do something and makes that little cockle, and if it were long enough it would make a bigger one. The longer the fibre the bigger the cockle will be.

Mr. Howe: I agree with Mr. Dilling: The middle roller not turning it loose sometimes will cause it. I think myself the cockle is formed

right in front instead of between the rollers.

Mr. Ellis, Anderson: That being the case, if the cockle comes in front of the steel roller would it not either break the end while it is being stopped or give a light place in the yarn by excessive twist.

J. S. Lockman, Lockhart: It may not be in the spinning. In my spinning on warp I go around at stopping time on Saturday, as I do not have a chance to observe it during the week, and up next to the steel rollers, with the frame stopped I find cockled places and when we start that frame off on Monday morning, we do not have cockled yarn. Sometimes I find fifty to one hundred ends in the same frame up next to the steel roller and we start it off and there are no cockles.

Chairman Harris: It will cockle when you bring a stop?

Member: It is caused from the traveler stopping and a little kink coming down.

Mr. Morton: I have had many things—chat'ering rolls almost ran me out of a job once. We had lots of trouble—the man from the shop could not stop it, and went all through the gears and could not stop it. I had a lot of cockled yarn, a lot that could not go through and tried to take out that lump, or put on a heavier traveler, it still continued. It is not between the middle roll and front roll because I could pull it out.

Mr. Harris: That is a good point. Will a heavy weighted frame make more or less cockles than a light

weighted frame? Anybody ever tried that or had a chance to observe?

Mr. Jones: I do not know if this has anything to do with that particular question—we have two pants, one operating on entirely double roving and the other on single roving, and in nine years on single roving we have had no cockled yarn. It is true the plant running on single roving has a heavier roving, which may have something to do with it.

Mr. Lockman: We have had that same experience at Lockhart.

Member: A fine number is more prone to cockle.

Mr. Harris: If you set your rolls as close on long as on short staple would that tell, Mr. Black?

W. A. Black, Spartanburg: I have had some experience on cockled yarn. I used to staple all the cotton that was bought at our place, when the plant was small, and have run on a bale of staple that was longer than we had been running, and I would let it slip by just to see what effect it would have, and then listen to our spinners. When it affected his work I would hear him. I have gone in and watched it make cockled yarn, and found that long staple had gone in. I contend that the cockle is made right at the front of the rolls and the cause is between the middle and the front rolls, in that the front roller bites the stock before the middle roller lets loose and something there must slip before the short fibre has been turned loose by the middle roll

while the longer one is intact, and the front roller making its usual revolutions the stock would slip. When this stock slips with that long fibre in there there is nothing for it to do but just kink up, and if when you pull out these cockled places, you catch it right close you can hear those long fibres snap, but if you should just come off a few inches you can feel that slip. That has been my experience with cockled yarn. The best way to keep cockled yarn out of the mill is to keep out uneven staple.

Stanley Black: This discussion has brought forth a theory. Your roving, if it is even, is delivered to the rolls in proportion, and if the front rollers take a certain amount of roving all the time the back roller is going to have a better grip on it than the back roller when it takes it, and is going to have a tendency to slide with roving, but then we all know the roving makes a thin place and when that thin place has a tendency to cockle more or less. However, a fellow figures that back the roller has a better grip and holds it best, and has a tendency to find out only that thin place goes by his attention and forms a cork-screw effect and that bunches the twist because of that slipping on that long fibre.

Mr. Eden, Clemson College: I am more or less responsible for some of the young spinners coming along. My explanation to my students is just the same principle as your wheels slipping in the mud. Your long fibre is held by both your front

B  
E  
S  
T  
  
S  
E  
R  
V  
I  
C  
E  
  
T  
E  
X  
T  
I  
L  
E  
  
O  
I  
L  
S

### "Best Service" Sizing Compounds

are made under careful laboratory control. All raw materials are bought on specification. Our finished products must meet our exacting standards. A trial order will convince you.



**Burkart-Schier Chemical Co.**  
 Manufacturing Chemists for the Textile Industry  
 Laboratory and Plant, Thirteenth Street and N. C.  
 & St. L. R. R.  
 Office and Warehouse, 1202-16 Chestnut Street  
 Chattanooga, Tenn.

B  
E  
S  
T  
  
S  
E  
R  
V  
I  
C  
E  
  
T  
E  
X  
T  
I  
L  
E  
  
O  
I  
L  
S



and middle roll, then your short fibres are caught by the front roller and thrown out on exactly the same principle as your rear wheels throw mud out and the twist running into long fibre and the short fibre having comparatively no place, and you find a place without any twist in it. That is how I explain the cockled yarn to my boys in the school.

Mr. Dilling: The past few years we have tried to get away from some of those things by the long draft spinning. That has been brought about by allowing middle roller unweighted and by other means to such pieces of leather or something that held it, but does not hold it so tightly but what the front roller does not pull out of it its contact but hold easy and surely. Some of these other long draft systems manufacturers think they have no cockled yarn. If they don't I think it is pretty good evidence that this trouble is caused by long cotton and held by two rollers and held so firmly that it has to slip somewhere. Some of the people have put in these light rolls that weigh  $2\frac{1}{2}$  to 3 ounces for middle rollers, and that is so light it will not hold. I have a man running a mill on  $1\frac{1}{4}$ -inch cotton who sets close and we can get them practically an inch from center to center setting, for they are as close as they can from center to center, and he does not have cockled yarn. It is caused by light rollers being so light they do not grip it so firm but that the other roller does not pull it down.

Mr. Jones: Is there anybody in the house running single roving having trouble with cockled yarn? No one. How many in the house running single roving? Quite a few.

Mr. Ellis, Pelzer: We have some Casablancoas spinning on the warp and some on the filling. I would not say we have cockled yarn like we have on the other system, but we do have a lumpier yarn, which is caused by too much twist and too much humidity. I believe the trouble is always worse near the humidifiers. You are certain to have lumpy yarn and it has almost the same effect as cockled yarn. On the Casablancoas system you cannot have cockled yarn.

Mr. Dilling: I just wanted the opinion of somebody as to whether they had cockled yarn.

Mr. Bagwell: If the long staple is wholly responsible for the cockled yarn, I would like to know why it is you can be running along in pretty clear weather and the atmosphere changes and you have cockled yarn? Also why the staple gets longer in wet weather than in dry? I open my rollers like everybody else does. I have had a good deal of experience in running 50s, both regular and crepe twist, and I find in changing either regular or crepe twist, everything the same except the twist I find that I can close my rollers up on the crepe twist and not get any cockles, but I find if I try the regular with this I have cockled yarn. Also run a lighter traveler but the yarn weighs the same, but it does not cockle. I have to open the rolls when I change the twist.

Mr. McNeill: I think Mr. Ellis' explanation of this lumpy yarn partially answers Mr. Bagwell's question. We have more cockled yarn in damp weather than at any other time. Long cotton that possibly would not cockle today, being dry, may give you trouble tomorrow. My observation has been that we will have more cockled yarn during damp days due to excessive humidity. Fibre is really longer in damp weather than in dry weather because it tends to stand straight.

Member: The belt slipping in the morning makes cockled yarn. I noticed a whole frame was cockled and the belt half off the pulley. The belt slips more in the morning than in the evening.

Mr. Morton: When it is dry the fibre will curl. You can take it and moisten it yourself and it will lay out straight. It shows longer in damp weather.

Member: It will not draw as well when it is dry. The spinning will not draw the roving as well. If you have uneven roving from your rolls the twist will run to the smallest place in the roving, and it is harder to draw at that place.

Member: Cotton shows longer in moist conditions. The cotton is exposed in a room with humidity in it to a certain degree for so many hours before the board passes on that cotton. It does not make the cotton any longer, you just get the true staple.

Chairman Harris: I do not mean to say you make the fibre any longer but it does stand straighter.

J. S. Lockman: I do not see how a slow running frame will make cockled yarn. I would like to know how it is. If this is true then the long fibre has nothing to do with it. You can just slack off a belt and make cockled yarn, back behind the roller has nothing to do with it.

W. S. Moore: The cockled yarn proposition is a pretty big thing. I went into it from several angles. I handled it by speeding up my middle roller on spinning frames and I agree with them in regard to the cockle at the front roll, but still the middle roll and the front roll both have a hold on the fibre at the same time, but the best thing I have found to do with cockled yarn is to fight it in the opening room.

Member: Will a slow frame make cockled yarn?

Chairman Harris: I don't think so. The belt will slip and catch, a slow frame will not do it.

Mr. Clark: I think it would be interesting to those discussing staple of cotton to have the figures made by O. G. Murphy, of Shawmut, Ala., who took as his test for the Arkwrights the different lengths of staple in same. The cotton that came from Tennessee as inch cotton was 21 per cent above an inch, 31 per cent inch cotton, or 52 per cent and above. The Oklahoma cotton is 17 per cent above inch, 30 per cent inch, or 47 per cent inch and above. Missouri cotton was 54 per cent inch and above. Texas cotton 22 per cent above inch, 33 per cent inch, or 55 per cent inch and above. Arkansas cotton 23 per cent above, 39 per cent inch, or 62 per cent inch and above. Alabama cotton 15 per cent inch, none above inch. One bale partic-

ularly showed 4 per cent less than  $\frac{3}{4}$  inch and much of it below three-fourths. This test shows that some cotton bought as inch cotton was 15 per cent inch cotton, some 62 per cent inch.

According to this test there is a great variation of staple in your cotton when you buy inch cotton and pay for it on that basis.

In the Alabama cotton there is only 15 per cent inch cotton in the average of three bales and yet they were paying the price of inch cotton.

Chairman Harris: Would it not be some information to give them what they consider good standard?

Member: The standard Mr. Murphy mentioned in this I do not understand. It says that no bale should contain less than 18 per cent of its staple under the heading above one inch. Not less than 27 per cent should be one inch, not more than 40 per cent, three-fourths, and not more than 5 per cent below three-fourths. These figures he gives here some of the bales show up to as high as 10 per cent of less than three-fourths. This is just submitted to the Arkwrights and I think it has some of the most valuable information ever obtained for the Southern Textile Association, and I suggest that you look into that very carefully. This Alabama cotton that does not show anything above one inch, and only shows 15 per cent one inch will not make any cockled yarn.

Member: Cotton is something that is grown and not manufactured. We are going to be able to place in our contracts of the cotton buyers that the staple shall contain 30 per cent better than inch or that it shall not contain only a certain percentage of  $\frac{3}{4}$  or  $\frac{1}{2}$  or whatever it might be. We have got to test them out and find out what we are doing when we get to buying cotton.

Mr. Clark: I think the time will come when we will buy cotton on the per cent of each length of staple.

Some mills keep a record of every lot of cotton and have plats made beginning with the long fibres and coming on down, and have a record with the name of the shipper and the names of the places from which the cotton was shipped and they do not buy again from the places where they get the low per cents of staple bought.

Member: I work the cotton down and throw away the long fibres and staple the bale for the average that is in the bale and not the longest and shortest. You may find some 32 per cent of inch fibres in it, but that does not class it as a bale of inch cotton. You may find some below the inch mark—you are going to get both.

Mr. Dilling: What per cent of inch cotton should be inch?

Member: That is a hard thing—cotton is grown and not manufactured. You take this year—cotton is much better body than last year. If you got a report from cotton grown last year on the same basis where Arkansas showed up the best last year may not show up as well this year. Difference according to seasons cause the body of the cotton to be better some years than others.

We have to buy our cotton at a price to manufacture goods and make money out of it and if we get so careful that the cotton shipper does not want your business you have to pay a premium of fifty to one hundred points over what he asks, and the other fellow is making the same as the first.

Mr. Dilling: We have to get the responsibility back where it belongs. If we have the Alabama cotton this year as against the Arkansas cotton, we will have a good per cent of additional waste. This test shows all Arkansas cotton is the best this year, and Alabama cotton the poorest. Next year it may be the reverse. It is a question that is coming up every year and we must test it all. You say you threw away the longest fibres?

Member: I staple with my fingers. I usually take the first pull and throw it away.

Mr. Dilling: Mr. Murphy says that 18 per cent of cotton should be above one inch and 27 per cent should be one inch. Only a little over one-fourth of it should be one-half. Fifty-five per cent should be one inch and better. I believe we will all concur that with the system Mr. Murphy has, he has an advantage over nine-tenths of the rest of us in getting cotton. If he has facilities of getting that he will do it, and if we look into that more earnestly and demand that we get a kind we want we will get the better grade, and if we demand that we get the cotton we set out to get and buy and pay for, I believe we will bring enough pressure to bear to put the selling on that basis and that the man who gives us good cotton will get a good price for it and the man who has poor cotton will get a less price. We manufacturers will have to bring pressure to bear to get as near as we can to what we set out to get and pay for. The mill who makes the best goods has the advantage and if we get the best advantage—and we will have to pass on it—as far as we are able, and the man who does not produce best cotton should not get the highest price.

Member: We have tried to get the farmers to plant a good seed. As late as 1920 the county I came from raised 17 per cent of inch better cotton. The last three years it was  $\frac{3}{4}$  to 1 inch.

Chairman Harris: I do not think we should leave the impression here that all Alabama cotton is bad cotton this year because this may be a particular section in Alabama.

Member: I have been West three times and the cotton is very fair this year.

Chairman Harris: We should not have to pay the same price for Alabama cotton as we pay for Arkansas cotton this season.

Mr. Dilling: I do not think there is a more important subject that we can discuss than this question of cotton staple and learn where good cotton came from. Good cotton may come from Alabama this year, and bad next year. We can bring pressure to bear wherever it ought to be brought to bear and cause the farmers to select a better seed and

(Continued on Page 26)



## Personal News

H. C. Patrick has accepted the position of overseer of spinning at the Rankin Mills, Gastonia, N. C.

J. W. Cox has resigned his position in the weaving department at the Anchor Mills, Rome, Ga.

Marvin Carter, of Opelika, Ala., has become overseer of spinning at the Borden Mills, Kingsport, Tenn.

J. W. Derrick, of Greenwood, S. C., has accepted the position of overseer of weaving at the Edna Mills, Reidsville, N. C.

C. C. Griffith has been promoted from second hand in weaving to night overseer weaving at the Ivey Mills, Hickory, N. C.

J. H. Mode, who has been with the Chadwick-Hoskins Mills, Charlotte, has become second hand in weaving at the Ivey Mills, Hickory, N. C.

Newton G. Hardie has been promoted from production manager to superintendent of the Oconee Mills, Westminster, S. C.

P. L. Wagner has resigned as superintendent of the Springstein Mills, Chester, S. C., a position which he has held for the past eight years.

J. E. McCarvey has resigned his position with the Georgia-Kincaid Mills, Griffin, Ga., to become overseer of weaving at the Cochran Mills, Cochran, Ga.

Henry Colvert has resigned as overseer of spinning at the Clifton Mills No. 3, Clifton, S. C., and accepted a similar position at the Spartan Mills, Spartanburg, S. C.

C. W. Petit has resigned as overseer of spinning at the Borden Mills, Kingsport, Tenn., and returned to his former position as overseer of spinning at the Monaghan plant of the Victor-Monaghan Company, at Greenville, S. C.

M. H. Carter has resigned as overseer of spinning at the Pepperell Manufacturing Company, Opelika, Ala., to become overseer of spinning, spooling, warping and slashing at the Borden Mills, Kingsport, Tenn.

Raymond P. Earnhardt, who has been secretary of the Wabenh Mills, Lexington, N. C., has been made general manager of the mill and will sever his connection with the Bank of Lexington to devote his entire time to the mill.

M. R. Gardner has been transferred from assistant superintendent of the Payne Mills, of the Bibb Manufacturing Company, Macon, Ga., to a similar position at the Crown Mill No. 2, of the same company, at Macon.

E. P. Cofield, general manager of the Ladlassie Mills, Anderson, S. C., has also been elected general manager of the Gossett Dyeing and Finishing Company, which has just been organized to build a dyeing and finishing plant at Anderson.

J. L. Dorn has resigned as superintendent of the Oconee Mills, Westminster, S. C.

B. E. Geer, president of the Judson Mills, Greenville, S. C., will also be president of the new Thies Dyeing and Processing Company, of Belmont, N. C.

A. C. Lineberger, Jr., secretary and treasurer of the Art Cloth Mills, Lowell, N. C., has also been elected vice-president and general manager of the new Thies Dyeing and Processing Company, Belmont, N. C.

C. M. Geer, vice-president and manager of the Art Cloth Mills, Lowell, N. C., has also been elected secretary and treasurer of the newly organized Thies Dyeing and Processing Company, Belmont, N. C.

W. Beswick, manager of the Shelbyville Mills, Shelbyville, Tenn., will also be manager of the Ocoee Spinning Company, which has just been organized in Chattanooga, to operate the mill at Prendergast, Tenn.

S. H. Lander, president of the Ladlassie Mills, Anderson, S. C., will also be president of the Gossett Dyeing and Processing Company, which was organized in Anderson last week.

### H. L. Lanier With National Ring Traveler Co.

Hyland L. Lanier, of West Point, Ga., has been appointed sales representative of the National Ring Traveler Company in Georgia and Alabama. Mr. Lanier is an experienced spinner, having been associated with the Shawmut Mills, Shawmut, Ala., for a long period of time. He is expected to make a very valuable addition to the Southern organization of the National Ring Traveler Company.

### Chas. Peasley Resigns Position.

Chas. Peasley, who has been representing the National Ring Traveler Company for a number of years, with headquarters at Charlotte, has resigned his position. He is one of the best known salesmen in the Southern territory and was three times winner of annual prizes offered by the company to the salesman developing the greatest amount of new business during the year.

He has been covering all of the Southern territory with the exception of Texas.

### S. T. A. to Meet in Asheville.

The annual meeting of the Southern Textile Association will be held at Kenilworth Inn, Asheville, N. C., one June 17 and 18.

The program for the meeting will be announced within a short time. Asheville, in past years, has proved a popular meeting place for the association and an unusually large attendance is expected.

## AMALIE PRODUCTS

## Economy and Quality in Bleaching and Dyeing

**A**N effective detergent for the kiering process, this kier agent readily dissolves and removes the natural fatty and waxy impurities in the cotton. As a result the subsequent bleaching process is greatly facilitated and a perfect white obtained in bleaching.

Bleacheries by using Amalie Sonolene have eliminated one boil where two boils were previously necessary.

In open and closed dyeing machines, the difficulties usually experienced with ordinary turkey red oils through foaming are eliminated by the use of Amalie Sonolene. It is especially recommended for Franklin Dyeing Machines.

In raw stock dyeing, the addition of 1½% to 2% Amalie Sonolene eliminates static.

*Leaflet completely describing the properties, function and uses of Amalie Sonolene sent anywhere free upon request.*

### L. SONNEBORN SONS, Inc.

*Manufacturing Chemists for the Textile Industry*

114 Fifth Avenue

New York

# Amalie SONOLENE

L. SONNEBORN SONS, INC., NEW YORK, N.Y.



# MILL NEWS ITEMS OF INTEREST

**Hickory, N. C.**—The Ivey Mills, which is now making cotton pongees, is preparing to install combing equipment, part of which has already arrived. The mill has been operated on sateens and twills. It has 15,360 spindles and 400 looms.

**Shelby, N. C.**—The Shelby Cotton Mills, R. T. LeGrand, treasurer and manager, have just placed a contract with the Draper Corporation for 168 late model looms to replace an equal number of old looms. They also placed a contract for 10 new mill cottages and have just finished the installation of five new Whitin cards and five new Woonsocket roving frames.

**Prendergast, Tenn.**—It is understood that the Southern Cotton Mills, formerly the Prendergast Cotton Mills, have been sold to the Oconee Spinning Company, which was organized at Chattanooga with C. B. Bagley, president. The mill is a 21,000-spindle yarn plant and will be operated under W. Beswick, general manager. Mr. Beswick is also manager of the Shelbyville Mills, Shelbyville, Tenn.

**Kinston, N. C.**—The affairs of the Kinston Cotton Mills have been placed in receivership following a hearing before Judge N. A. Sinclair. The action for receivership was brought by the Atlantic Bank and Trust Company. L. J. Mewborne has been appointed temporary receiver and will continue to operate the mill, of which he has been president for some time. Final hearing for appointment of a permanent receiver will be held here April 11. No statement as to the assets and liabilities of the company has been made public.

**Anderson, S. C.**—The Gossett Dyeing and Finishing Company, recently organized with a capital of \$200,000, plans immediate expenditure of \$150,000 for a combination bleaching, finishing and dyeing plant here. The new plant will mark the fifteenth of the Gossett chain of textile industries operating in North and South Carolina.

Contract for the new mill will be awarded next week, as plans and specifications have already been made. Cottages to house the operatives will also be constructed. It is planned to have the new plant completed and in full operation by August 1. The plant, for the most part, will handle fabrics which come from 14 other Gossett mills.

The Gossett Dyeing and Finishing Company is a new organization. James P. Gossett, president of the American Cotton Manufacturing Association, will be chairman of the board of directors, while Samuel H. Lander, president of the New Lasselie Mills, also a Gossett mill, will be president of the new corporation. Other officers are E. E. L. Martin, vice-president, and E. P. Coffield, general manager.

## FRED'K VIETOR & ACHELIS

COMMISSION MERCHANTS

65-69 Leonard St.

New York

DICKSON & VALENTINE DEPT.

## THE FARISH COMPANY

COMMISSION MERCHANTS

100 WORTH STREET

NEW YORK

## BELL'S SERVICE RINGS TRUE

CONSULTING, SUPERVISING, DESIGNING AND CONSTRUCTION

OF

TEXTILE MILLS & BLEACHERIES—STEAM & HYDRO-ELECTRIC PLANTS  
OLD MILLS REORGANIZED, EXTENDED & APPRAISED  
MILL VILLAGE DEVELOPMENT—WATER & SEWAGE DISPOSAL

GEO. C. BELL

MILL ENGINEER & ARCHITECT

420 PIEDMONT BLDG., Phone 6628 CHARLOTTE, N. C.

## K-A Electrical Warp Stop Equipment for Looms

The Warp Stop with a twenty-four year record of Reliability, Sustained Efficiency and Low Cost of Maintenance.

The Warp Stop which many representative Southern Mills are adopting.

For information pertaining to warp stop motions and drop wires, get in touch with

Southern Representative  
WILLIAM D. WHITTAKER

R. I. Warp Stop Equipment Co.

P. O. Box 2063

Atlanta, Ga.

Members American Society Landscape Architects

## E. S. DRAPER

1516 E. Fourth St.  
CHARLOTTE, N. C.

101 Marietta Bldg.  
ATLANTA, GA.

LANDSCAPE ARCHITECT and ENGINEER

Town Planning and Mill Villages —  
Real Estate Subdivision and Re-  
sorts

Country Clubs and Golf Courses  
Private Estate and Home Grounds  
Parks, Playgrounds and Cemeteries

Complete Topographic Surveys  
General Designs, Grading, Planting  
and Detail Plans

Supervision of Landscape and  
Engineering Construction

Largest Landscape Organization in the South

**Orangeburg, S. C.**—The Orange Cotton Mills, which purchased a site outside the city limits some time ago to which the mill will be moved, will not begin the removal for a year or more. Tentative plans for the building are being prepared by Wm. W. Wannamaker, Jr., son of the president of the mill.

**Albany, Ala.**—Contract for the erection of the Albany Hosiery Mills, controlled by Cooper, Wells & Co., has been let to Batson Cook, of West Point, Ga. The plant will be one story, 100x140 feet, to cost \$40,000, exclusive of machinery.

The mill will make full fashioned hosiery and the machinery is now being built in Germany.

**Greensboro, N. C.**—Machinery for the Reading Hosiery Mill, which is being moved here from Reading, Pa., has begun to arrive and is now being installed in the Standard building on North Main street. It has not been decided how much equipment will be moved now. S. S. Miller, head of the company, is said to operate 1,000 knitting machines and may decide to gradually place them all here.

**Charlotte, N. C.**—Contract for the erection of the plant of the Pinoca Mills, Inc., was let to T. C. Thompson & Bros., of Charlotte. Work is expected to begin at once and the building should be ready in June.

The contract price was not divulged, but it is understood the first unit will cost between \$150,000 and \$250,000. The building will be a two-story brick building, of modern mill construction. The building will be 84 feet wide and 240 feet long. The mill will have 100 looms for making rayon draperies.

The building will stand in the midst of a tract of 109 acres of land which the promoters of the enterprise bought some months ago, and between the tracks of the Piedmont & Northern Railway and of the Seaboard Air Line Railway, both of whose tracks touch Pinoca.

The plans of the promoters are to construct other mills as occasion justifies and the outline of the plan has six possible units marked out at designated spots on the acreage, in contemplation of eventual investment of up to \$500,000.

The contract was awarded at the Hotel Charlotte by Dwight Seabury, head of the Dwight Seabury Company, architects of Pawtucket, R. I., and F. H. Schloss, president of Pinoca Mills, Inc., and president also of the Darlington Textile Company of Pawtucket, R. I.

**Connelly Springs, N. C.**—Fire originating from an unknown source completely destroyed the Blue Ridge Cotton Mill and entailed a total loss of approximately \$150,000. There is no fire fighting equipment at Connelly Springs. The Blue Ridge Cotton Mill was owned and operated by a stock company of which J. W.



Abernethy, of Newton, is president, and B. M. Spratt, of Hickory, is secretary-treasurer and general manager.

Until the last few weeks the mill has been in operation intermittently but recently it had suspended operations, according to information gathered here. The mill, built in 1919, was on the south side of the Southern Railroad track just west of the station and was mostly of brick structure. Mr. Abernethy, the president of the company, is in the hospital recovering from a recent illness.

**Chattanooga, Tenn.**—The Davenport Hosiery Mills have not been sold to Merrill, Lynch & Co., New York, but are being reorganized and the latter firm will handle the sales of new stock issue that is being made, according to T. Walter Fred, president of the mill.

Under the reorganization plan, Mr. Fred will be president and J. H. and R. B. Davenport will be other majority stockholders. The Davenport Hosiery Mills and the Davenport Silk Mills will be combined into one corporation known as the Davenport Hosiery Mills, Inc. There will be no change in the management of the company, which makes the well known Humming Bird hosiery.

The company is issuing \$1,000,000 in 7 per cent preferred stock, at \$100 par value, each share carrying the privilege of purchasing two shares of common stock at \$27.50 per share.

**Belmont, N. C.**—B. E. Beer, prominent textile executive of Greenville, S. C., and president of the Judson Mills, Greenville, was elected president of the Thies Dyeing and Processing plant; A. C. Lineberger, Jr.,

#### For Sale

Forty (40) Ribbers, with Double Feed Stop Motion. Can be bought at a bargain. Machines run less than a year. If interested, address "Ribber," care Southern Textile Bulletin.

#### Wanted

Experienced tying machine man. Good wages; good living conditions. Must be dependable. Address M. J. D., care Southern Textile Bulletin.

## FABREEKA

The Standard Textile Belting  
USED throughout the Industry

#### BECAUSE

It is waterproof  
It has long life  
It gives increased production  
It costs less

#### ASK US

J. Russell McElwee *Manager*  
John W. Evans *Representative*  
Robert M. Roberts *Representative*

**Fabreeka Belting Co.**  
Southern Headquarters, ROCK HILL, S. C.

## LA SOIE DE CHATILLON

Soc. An. Italiana—Capital 200,000,000 Lires—Milan, Italy

### RAYON (Viscose).

DAILY OUTPUT 50,000 lbs.

"SERIS"  
Artificial Schappe

"CHATILAINE"  
Artificial Wool

ARTIFICIAL STRAW

ARTIFICIAL HORSEHAIR

SOLE SELLING AGENTS AND DISTRIBUTORS U. S. A.

### ASIAM, Inc.

59 Pearl St., New York City

Whitehall 8572-8389

John L. Davidson, Southern Representative

## Loom Cords a Specialty



We Also Manufacture

### The Improved Dobby Bars and Pegs

### Rice Dobby Chain Company

Millbury

::

::

::

::

Mass.

## Skins--Check Straps--Strapping

CONSISTENCY { QUALITY  
PRICE

### REPAIR SERVICE

## Schachner Leather & Belting Co.

419 South Main Street  
Greenville, S. C.

## FERGUSON GEAR COMPANY

CUT GEARS

CHAIN DRIVES

BEVEL SPUR SPIRAL WORM SPROCKETS

RAWHIDE BAKELITE AND HARDENED STEEL PINIONS

Member American Gear Manufacturers Association

GASTONIA, NORTH CAROLINA

## Reliable Humidifying Devices Since 1888

### AMERICAN MOISTENING COMPANY

Atlanta  
Georgia

Boston  
Massachusetts

Charlotte  
North Carolina

Greenville  
South Carolina

of Belmont, vice-president and general manager, and C. M. Geer, of Gastonia, secretary and treasurer, at the organization meeting of the company held recently. These three officers and A. C. Lineberger and R. L. Stowe, of Belmont, constitute the board of directors.

Work will begin at once on the construction of the plant, said Mr. Lineberger. The machinery will arrive from Germany some time in July.

The plant will be located on the site of the Continental Brick & Tile Company on the Gaston side of the Catawba River, a short distance east of Belmont. Offices of the company will be in Belmont, most likely in the New York Building. The new corporation will do commercial and job dyeing and finishing. The machinery to be used is new in America and this firm has the exclusive right to its use in North and South Carolina, and a three-year right to all the rest of the South.

**Belmont, N. C.**—Stockholders of the Acme Spinning Company will hold a special meeting March 31 to ratify a recommendation of the board of directors that the capital stock of the company be increased by \$320,000, of which \$220,000 will be common stock and \$100,000 preferred. The increase is recommended by the directors in order to improve and enlarge the plant, which now has 16,000 spindles. The mill is now capitalized at \$550,000.

#### For Sale

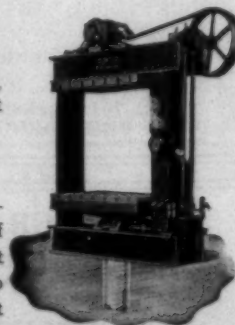
- 1—Cook Vacuum Card Stripping Equipment with tank and compressor.
  - 33—Deliveries Whitin Drawing, Metallic Rolls.
  - 4—Woonsocket Slubbers, 10"x5", 52 spindles.
  - 24—Whitin Spinning Frames, Band Drive, 3½" Gauge, 2" Ring, 204 Spindles each.
  - 15—Whitin Twisters, 4½" Gauge, 3½" Ring—Four Ply.
  - 4—Whitin Spoolers, 4"x6".
  - 28—Universal Winders, Style, 8 and Style 50.
  - 1—F. S. Perkins 18"x12" Machine Lathe, with Chuck.
- Also Warper, Yarn Press, several Reels and lot of bobbins and spools. Machinery now in operation. Good condition. Located in South. Address G. E. W., care Southern Textile Bulletin.

## BALING PRESS

75 to 300  
Tons

With or without  
Motor

Any width, opening, and rise of platen to suit your work—Also Knuckle Joint and Power Screw Presses. Let us tell you more about them.



Established 1872

**Dunning & Boschert Press Co., Inc.**  
367 W. Water St. SYRACUSE, N. Y.

## Spinners' Meeting Discusses Defective Yarn

(Continued from Page 20)

give more attention to the selection of seed.

Chairman Harris: We have asked Philip Wentworth, of the National Ring Traveler Company, of Providence, R. I., to come down today, and he has some information. We made it plain to Mr. Wentworth that this was not to be a discussion from the standpoint of any particular traveler but Mr. Wentworth has some very valuable information on travelers, and we are delighted to have him here. As he has to leave right after lunch we will ask him to speak at this time.

Mr. Wentworth's address appears on Page 14.

Chairman Harris: We appreciate the remarks of Mr. Wentworth, and if there are any others who have

any remarks to make we would be glad to hear from you at this time.

Professor Eden, Clemson College: At Clemson we have developed a testing laboratory which we have been trying to introduce to you gentlemen for two years now at the textile shows. We also want to be of some benefit to you if we can. In our laboratory we are very glad to make tests of breaking strength or average yarn numbers for you, in this way testing your size work or checking your own the work on your own machines or checking the instruments themselves. If you are having trouble with your sizings we would be very glad to check these sizings for you if you are having trouble with them, or if your breaks are not coming to where you think they should be coming we would be very glad to make these tests for you. We would be very glad to make them according to the specifications, according to the com-

mittee D-13. I just wanted to call your attention to the fact that we have this service department up there, and would be glad to do any reasonable amount of work for you. Some of you may want to check your own machines. You may want to make some breaks and send some of the same to us to be checked and we would be very glad to do this for you at no expense to you, if your demands are reasonable. Clemson College has this testing laboratory and we would be very glad to co-operate with any of you who would like to have this done.

Chairman Harris: We appreciate that, Mr. Eden, and I am sure a good many of the men will be glad to take advantage of that.

Mr. Eden: Last year we checked work for about fifteen mills, and I am quite sure that if any of the men here had that work done at our laboratory that they will tell you they were quite satisfied with

the results that we gave. It is not a commercial business, and sometimes we might be slow in getting our reports back to you, but since it is free we would not expect to rush it.

The meeting then adjourned for lunch.

(Note—The stenographer reporting the meeting was unable to attend the afternoon session. The report of the afternoon session is based on notes by David Clark.)

### Afternoon Session.

At the opening of the afternoon session, Chairman Carl R. Harris asked for suggestions relative to subjects to be discussed.

George Ray stated that he was having hand troubles and would like to have a formula for hands that would break after being driven and would not stay on the spindles and make slack yarn. He stated that

## MANUFACTURERS OF HIGH GRADE AND TRUE RUNNING BOBBINS

### ROLLS

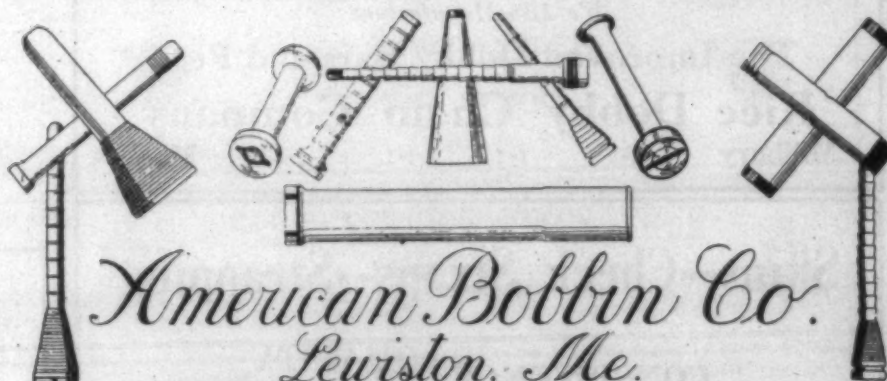
UNDERCLEARER  
FOSTER WINDER

### SPOOLS

TWISTER  
METAL PROTECTED

ENAMELED BOBBINS  
OF ALL KINDS

CONES AND BUTTS



### BOBBINS

MULTIPLE HOLE FEELER  
SLUBBERS  
INTERMEDIATE  
WARP  
TWISTER  
SPEEDER  
FILLING  
FLAX AND JUTE  
METAL PROTECTED  
DUCK FILLING  
UNIVERSAL WINDERS  
WOOL FILLING  
WOOL WARP  
RAYON

WE ARE SPECIALISTS IN MANUFACTURING

AUTOMATIC LOOM AND RAYON BOBBINS OF ALL TYPES

### INSPECTING SEWING

BRUSHING  
SHEARING  
SINGEING  
PACKAGING  
FOLDING

## Curtis & Marble Machine Co.

Textile Machinery  
Cloth Room and Packaging Machinery  
WORCHESTER, MASS.

SOUTHERN OFFICE

1000 Woodside Bldg.

Greenville, S. C.

### DOUBLING MEASURING

WINDING  
STAMPING  
TRADEMARKING  
CALENDER  
ROLLING

## SCOTT TESTERS

The Standard of The World For Tests of Fabrics,  
Yarns, Twines, Etc.

Manufactured By  
HENRY L. SCOTT CO.  
101 Blackstone St.  
PROVIDENCE, R. I.

Direct Southern Representative  
The Aldrich Machine Works  
Greenwood, South Carolina

### "HIGH GRADE"

BOBBINS  
SPOOLS  
SHUTTLES  
SKEWERS  
ROLLS, ETC.  
OF EVERY DESCRIPTION

## THE DAVID BROWN COMPANY

Lawrence, Mass.

Correspondence Solicited

Catalog on Request

### AUTOMATIC SHUTTLES

Our Automatic Shuttles are giving Perfect Satisfaction in Leading Mills throughout the country on all classes of work.



he was making 25s and 30s warp and 35s to 40s filling.

J. S. Lockman said that he used a seven strand band with 98 to 100 bands per pound; that they were made from 3.12 hank roving. He said that he liked a seven strand band but that one of five or six strands would not last as well; that he put the hardest twist in the first twist of the band.

Peter Quinn said that the standard weight was 120 bands per pound with three hank roving, seven strands.

John S. Lockman said that for 30s and 40s, 120 bands to the pound was all right.

Peter Quinn said that 120 bands per pound was also all right on coarse numbers.

George Ray wanted to know how to get the twist into the back of the loop.

Peter Quinn said that if the machine was set properly that it would throw the twist into the loop.

W. T. Morton said that unless the hook on the band machine was perfectly round the twist would not go into the loop and that some hooks became worn.

L. E. Wofford asked George Ray if his bands were made out of one-inch cotton; he said that bands made from staple cotton did not wear well.

L. E. Wofford said that he used 100 bands to the pound.

C. W. Parrott said that he used 110 to 120 bands to the pound.

Peter Quinn said that with a tension device put on bands that 120 bands to the pound would last better than the 100 bands to the pound.

W. T. Morton said his bands were 100 to the pound.

R. F. Bagwell said that he used a five strand band of 2.5 hank roving, 100 to the pound and that the secret of getting the twist into the loop was in the band boy.

Chairman Harris wanted to know if any one could tell him the proper amount of spinning room waste, that is, waste from the clearers laps, sweeps and roving per 1,000 spindles on 30s with 15-16 cotton.

John S. Lockman said that he had the figures and would mail them to Mr. Harris.

Marshall Dilling read extracts from a test made by Gorge F. Brietz, of Selma, N. C., for admission to The Arkwrights, showing that with lighter carding the amount of spinning room waste was greatly reduced.

Chairman Harris explained to the meeting that any man who desired to be admitted to The Arkwrights could make application and be assigned his test and that if the test was satisfactorily completed the member would be admitted.

W. T. Morton wanted to know if it was practical to run anything smaller than A-1 circle traveler on a No. 2 flange ring.

Chairman Harris said "No." John S. Lockman said he tried it but found it would not work.

W. G. Brittain said that he used the following rule of thumb: If the circle is large enough the traveler will run around free when the end of the yarn is pulled up by hand; if not large enough, it will pull or

bite the yarn when the end is pulled up.

Peter Quinn said that the size of the traveler that could be used depended a great deal upon the size of the yarn, the while an A-1 traveler might be used on a new ring, it might not work on an old ring that was worn.

A. L. Ellis said he was using an A-1 traveler on No. 2 flange ring.

Robert F. Eaton wanted to know if there was such a thing as a standard of circle and if travelers were gauged?

John S. Lockman said that there were traveler gauges but that none of the traveling salesmen would let a mill man keep one of them.

John S. Lockman wanted to know what was best to keep the balloon out of yarn except using heavy travelers.

Peter Quinn said that it was best to use the heaviest possible traveler and that the square point traveler would hold down the balloon best.

John S. Lockman did not like the heavy traveler and preferred to get the balloon out with a thread board or guide. He used on filling, an upright wire set one inch from back of rail.

Mr. Walter wanted to know if Lockman had had any singles as a result of light travelers.

John S. Lockman said "No."

A member asked if Lockman reduced the distance from the top of the quill. Member asked which kind of traveler wears out the quicker?

Peter Quinn said the round point; that the heavy traveler made the ring last longer and that the square point traveler made rings last longer.

John S. Lockman could not see how light traveler with less friction would wear out the ring faster.

J. H. Nichols said that he ran 36s and 45s and found he had to replace the rings on 45s earlier than on 36s. He ran 12-0 on 36s and 16-0 on 45s, both the same spindle speed. He also said he got better results from  $\frac{3}{4}$  circle than 1-A on 2 flange ring and that this applied both to old and new rings.

George Ray used square point traveler on filling and round point on warp.

M. M. McNeil wanted to know what percentage of those present used square point and round point travelers.

A showing of hands showed that there were the same number of each.

W. T. Morton wanted to know how often travelers should be changed on 30s warp.

Answers by various members were: four weeks, three weeks, two weeks and according to conditions.

George Ray wanted to know what would result from changing from square point to round point travelers.

John S. Lockman said that round point, being sharper, makes only a very small ridge and that square point could not fill up the grooves and would run in the groove part of the time and out part of the time.

Mr. Walter wanted to know the difference between round point travelers and square point travelers after they were worn round.

**DU PONT**

## Acids and Heavy Chemicals

Acids: Sulphuric—Chamber,  
Oil of Vitriol 66°—Oleum,  
Muriatic—Acetic—Nitric—  
Mixed—Lactic.

Sulphate of Alumina: *Commercial and Iron Free.*

Ammonia and Potash Alums,  
U. S. P.

Barium Chloride  
Calcined Glaubers Salt



E. I. du Pont de Nemours & Co., Inc.

3500 Gray's Ferry Road, Philadelphia, Pa.  
256 Vanderpool St., Newark, N. J.

## COLORED COTTON YARNS

4s to 20s single and ply, hosiery and warp twist, direct and sulphur colors in blends, solid colors, heather mixtures, black and white twists, etc.

OF THE HIGHEST QUALITY

manufactured by

**Lavonia Manufacturing Co.**  
LAVONIA, GEORGIA

## EMMONS LOOM HARNESS COMPANY

The Largest Manufacturers of Loom Harness and Reeds in America

Loom Harness and Reeds

Slasher and Striking Combs, Warps and Leice Reeds,  
Beamer and Dresser Hecks, Mending-Eyes, Jacquard  
Heddles

LAWRENCE, MASS.

## M E R R O W

Registered Trade Mark

HIGH SPEED TRIMMING AND OVERSEAMING, OVEREDGING  
AND SHELL STITCH MACHINES

For use on all kinds of Knitted and Woven articles, including Rayon Underwear, Corsets and Rubber Goods, Blankets, Hosiery, Bathing Suits, Sweaters, etc.

ASK ABOUT OUR NEW STYLE 60-ABB MACHINE

For simultaneously trimming and joining with a Flat Butted Seam the ends of Cotton, Woolen or Silk Piece Goods for Subsequent Processing.

**THE MERRROW MACHINE COMPANY**

20 LAUREL STREET, HARTFORD, CONN., U. S. A.



A member said they did not wear round.

W. T. Morton said he took charge of one mill and the superintendent complimented him on the improvement in the work and that when he told him that it resulted from changing the travelers, he remarked that the same thing happened the previous July when some new travelers were put on.

Chairman Harris called on William Dutemple, of Whitinsville Spinning Ring Company, for some information about a machine he had.

Mr. Dutemple said it was a Rotostat and that it would show a traveler as if in slow motion and the action of the traveler on the ring could be seen.

Marshall Dilling suggested taking up the matter of cleaning in spinning rooms, especially the picking of clearers, as he had an idea that some picked the clearers too often. Mr. Dilling said he only picked his clearers about every six hours on 60s and 80s yarn.

John S. Lockman did not think that slats should be picked until a heavy pad had accumulated. He picked slats twice per day on 36s and 40s and three times on coarser work. He wiped guides as often as necessary to keep clean.

Mr. Smith picked slats twice per day, and wiped back guides four times per day. He ran front guides every hour. He said he got better results picking slats twice per day instead of three times.

Stanley Converse picked rollers

once per day and once at night; he picked slats twice per day.

Stanley Black wanted to know who was using clean-up hands.

Mr. Lever was on 30s warp and 41s filling. He ran 18 sides and clean-up hands handled 40 frames; he said that he fanned out, and while most men present did not agree with him, he could not see any bad results from fanning.

George Ray was on 25s to 30s warp and 30s to 45s filling. His warp spinner ran 30 sides, while his filling spinner ran 24 sides. His clean-up hands handled 34 sides. He wanted to know the advantages of group or single doffing.

Mr. Lever said that he only allowed two frames doffed on a warp section at a time. The doffers brushed the side rockers. He had made a special brush to replace rail brooms and obtained splendid results. He cleaned his spindles once per week.

Member said that the trouble with group doffing was that many mills ran so many numbers that it took more doffers to keep up the way in which the frames ran out.

J. H. Nichols said he liked four doffers to the frame, but it required a head doffer to work each of them.

Mr. Smith said he used grown men and that they doffed from 7 to 24 frames, according to the number.

T. C. Drew had changed from group doffing to one doffer to the set.

J. S. Lockman said that four doffers would get better production but that one doffer to the set was more practical and that single doffing

eliminated many other troubles. He said that paying by the hank was the best system for doffing.

George H. Hughes, a new member from Kingsport, Tenn., said that he paid all doffers, spinners and section hands by the hank and liked that system.

A member said he had changed to paying doffers by the hank and found it much better.

In reply to a question, George H. Hughes said that he figured the doffing rate on full production and let the help get extra pay for extra production.

John S. Lockman wanted to know if any allowance was made for frames that broke down or stopped for any reason.

George H. Hughes said that he made an allowance for breakdowns or shifted the hand to another machine.

Stanley Converse wanted to know how many were using socket wrapped piecings and if it was preventing thin places.

J. Y. Jones said it eliminated thin places in warp. He did not have feelers.

A. L. Ellis used bunchers back on the weaving room to piece up.

John S. Lockman did not like socket wrapped piecings.

Member wanted to know how much yarn came back on bunches from the weave room.

Peter Quinn said about five yards to the bobbin.

The hour of 3:30 having been reached, Chairman Harris thanked

the members for making the meeting a success and it was adjourned.

#### Among Those Present.

Among those who attended the meeting were:

Addison, J. M., O-Spinning, Hartwell Mill No. 1, Hartwell, Ga.

Alexander, J. F., Carder and Spinner, Eastside Mfg. Co., Shelby, N. C.

Allen, L. D., Overseer, Alexander Mfg. Co., Forest City, N. C.

Bagwell, R. F., Supt., D. E. Converse Co., Columbia, S. C.

Bailey, T. M., Salesman, Detroit Graphite Co., Greenville, S. C.

Baker, J. S., Pelzer Mfg. Co., Pelzer, S. C.

Baker, H. W., Acme Loom Harness & Reed Co., Greenville, S. C.

Batchelor, Geo. H., Salesman, Armstrong Cork & Insulating Co., Greenville, S. C.

Cecknell, W. W., Supt., Arkwright Mills, Spartanburg, S. C.

Black, S. A., Night Supt., Lancaster Mills No. 3, Lancaster, S. C.

Black, W. A., Supt., Beaumont Mfg. Co., Spartanburg, S. C.

Blair, William G., Branch Mgr., Armstrong Cork & Insulating Co., Greenville, S. C.

Bobo, J. L., Overseer Weaving, Anderson Mills, Anderson, S. C.

Bobo, T. G., Second Hand, Anderson Mills, Anderson, S. C.

Bray, J. G., Overseer Carding, Woodside Mills, Greenville, S. C.

Britton, W. J., Supt., Spartan Mills, Spartanburg, S. C.

Burgess, J. M., Overseer Spinning, Union Buffalo, Union, S. C.

## Let Us Fix Your Requirements

You are assured of complete satisfaction in all your dealings with us.

The quality of our products and the service we render are alone responsible for our growth. Emmons Quality Loom Harness and Reeds have retained every old customer and gained new customers year after year.

Write us for estimates on your needs

EMMONS LOOM HARNESS CO., LAWRENCE, MASS.

Sole Agents for Wardell Pickers

The Largest Manufacturer of Loom Harness and Reeds in America

Southern Representative: GEO. F. BAHAN

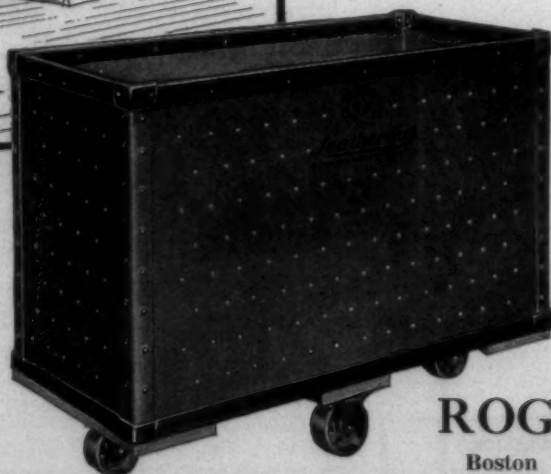
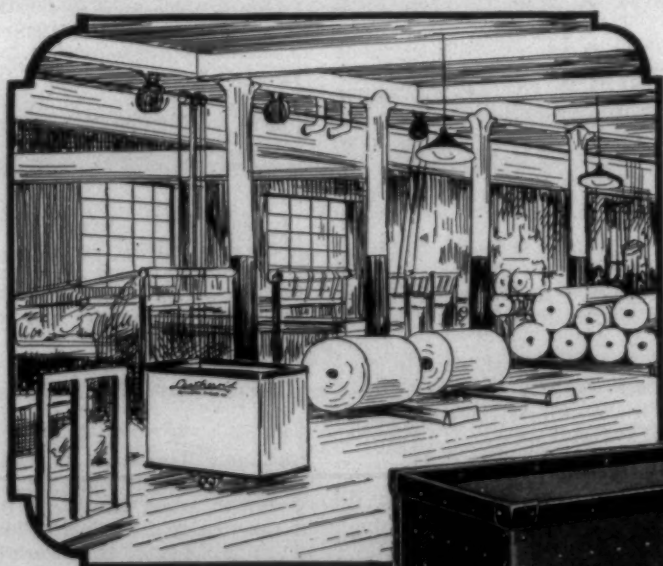
— for —

Cotton Harness, Mail Harness, Selvedge Harness, Reeds, Slasher and Striking Combs, Warper and Liece Reeds, Beamer and Dresser Hecks, Mending Eyes, Jacquard Heddles, Etc.

# EMMONS LOOM HARNESS AND REEDS



- Burnham, W. H., Salesman, Parks-Cramer Co., Charlotte, N. C.  
 Callas, Claude, Overseer Spinning, Courtney Mfg. Co., Newry, S. C.  
 Carpenter, D. O., Overseer Spinning, Thrift Mill, Paw Creek, N. C.  
 Carter, A. B., Sou. Agt., Victor Ring Traveler Co., Gastonia, N. C.  
 Carter, A. D., Salesman, Victor Ring Traveler Co., Gastonia, N. C.  
 Carter, J. A., Overseer Spinning, Clifton Mill No. 1, Clifton, S. C.  
 Clark, C. C., Salesman, Hart Products Corp., Spartanburg, S. C.  
 Clark, David, Editor, Southern Textile Bulletin, Charlotte, N. C.  
 Collins, G. R., Overseer Spinning, Chadwick-Hoskins Co., Pineville, N. C.  
 Colvert, J. H., Overseer Spinning, Spartan Mills, Spartanburg, S. C.  
 Compton, R. J., Overseer, Arkwright Mill, Spartanburg, S. C.  
 Connelly, W. R., Overseer Carding and Spinning, Pacific Mills, Columbia, S. C.  
 Converse, Stanley W., Asst. Supt., Clifton Mfg. Co., Converse, S. C.  
 Cranford, J. B., Albemarle, N. C.  
 Cranford, P. L., Overseer Spinning, Chadwick-Hoskins No. 2, Charlotte, N. C.  
 Cranford, Z. F., Supt., Dilling Cotton Mills, Kings Mountain, N. C.  
 Crow, Smith, Supt., Drayton Mills, Spartanburg, S. C.  
 Culbertson, E. R., Sales Engineer, S. K. F. Industries, Inc., Charlotte, N. C.  
 Dallas, D. C., Overseer, Camperdown Mills, Greenville, S. C.  
 Davis, W. F., Supt., Brandon Mills, Greenville, S. C.  
 Deason, W. T., Carder and Spinner, Union, S. C.  
 Dilling, Marshall, Supt., A. M. Smyre Mfg. Co., Gastonia, N. C.  
 Dorn, A. M., Salesman, Armstrong Cork & Insulating Co., Greenville, S. C.  
 Drew, T. C., Jr., Night Supt., Converse Mill, Converse, S. C.  
 Dutemple, Wm. P., Salesman, Whitesville Spinning Ring Co., Spartanburg, S. C.  
 Eaton, Robert E., Prof. Carding and Spinning, Clemson College, S. C.  
 Ellis, A. L., Overseer Spinning, Pelzer Mfg. Co., Pelzer, S. C.  
 Ellis, P. W., Asst. Supt., Anderson Cotton Mill, Anderson, S. C.  
 Frye, G. V., Asst. Supt., Florence Mills, Forest City, N. C.  
 Gantt, W. S., Second Hand Spinning, Ella Mill, Shelby, N. C.  
 Garrison, A. F., Supt., Hartwell Mill, Hartwell, Ga.  
 Gibson, L. B., Supt., Union Buffalo Mill, Fairmont, S. C.  
 Grant, L. L., Spinner, Cascade Mill, Mooresville, N. C.  
 Gray, W. H., U. S. Dept. of Agriculture, Clemson College, S. C.  
 Gregg, J. M., Sec. and Treas., Southern Textile Association, Charlotte, N. C.  
 Greer, Jas. A., Sou. Mgr., American Wool and Cotton Reporter, Greenville, S. C.  
 Gregory, W. L., Overseer Weaving, D. E. Converse Co., Columbia, S. C.  
 Grey, George, Section Man, Cowpens Mfg. Co., Cowpens, S. C.  
 Grimes, M. T., Anderson, S. C.  
 Hardin, S. S., Weaver, Lancaster Mill No. 3, Lancaster, S. C.  
 Harris, Carl R., Asst. Supt., Inman Mills, Inman, S. C.  
 Haskins, L. L., Sou. Rep., Akron Belting Co., Greenville, S. C.  
 Hill, H. F., Spinner, Saxon Mill, Spartanburg, S. C.  
 Howard, Percy H., Dist. Mgr., Fuller Brush Co., Charlotte, N. C.  
 Howe, B. F., Overseer Spinning, Republic Mill Nos. 1 and 2, Great Falls, S. C.  
 Huff, J. H., Supt., Camperdown Mills, Greenville, S. C.  
 Hughes, Geo. H., Supt., Borden Mills, Inc., Kingsport, Tenn.  
 Johnson, P. D., Salesman, National Gum and Mica Co., Atlanta, Ga.  
 Johnson, W. C., Overseer Spinning, Duncan Mills, Greenville, S. C.  
 Jones, Jno. D., Genl. Supt., Union Buffalo Mills Co., Buffalo, S. C.  
 Jones, J. Y., Overseer Spinning, Newberry Cotton Mills, Newberry, S. C.  
 Jordan, R. L., Overseer Carding, Thrift Div., Kendall Mills, Paw Creek, N. C.  
 Kimbril, A. C., Salesman, Terrell Machine Co., Charlotte, N. C.  
 Kirby, H. J., Overseer Carding, Easley Mill No. 1, Easley, S. C.  
 Lee, R. L., Jr., Instructor, Clemson College, S. C.  
 Lee, William, Selling Agent, Fales & Jenks Machine Co., Charlotte, N. C.  
 Lewis, C. L., Asst. Supt., Shelby Cotton Mills, Shelby, N. C.  
 Lockman, C. H., Supt., Henrietta Mill No. 2, Caroleen, N. C.  
 Lockman, John S., Overseer Spinning, Monarch Mills, Lockhart, S. C.  
 Lockman, F. D., Supt., Monarch Mill, Lockhart, S. C.  
 Lucius, J. T., Piedmont Supply Co., Greenville, S. C.  
 Lybrand, S. R., Asst. Supt., Union Buffalo Mills Co., Union, S. C.  
 McGarity, P., Supt., Mills Mill, Greenville, S. C.  
 McNeill, T. M., Supt., Monarch Mill, Union, S. C.  
 Mattox, J. L., Overseer Spinning, Monarch Mills, Union, S. C.  
 Metzger, E. W., Cost Clerk, Union Buffalo Mills Co., Union, S. C.  
 Mills, W. H., Salesman, Seydel-Woolley Co., Atlanta, Ga.  
 Mitchell, Warren, Salesman, J. E. Rhoads & Sons, Greenville, S. C.  
 Montgomery, W. S., Jr., Asst. Treas., Spartan Mills, Spartanburg, S. C.  
 Moore, G. B., Arcadia Mills, Arcadia, S. C.  
 Moore, W. S., Supt., Henrietta Mills, Henrietta, N. C.  
 Morton, W. T., Overseer Spinning, Mollohon Mills, Newberry, S. C.  
 Nichols, J. H., Overseer Spinning, Monarch Mills, Union, S. C.  
 Osteen, R. T., Salesman, Southern Textile Specialty Co., Greenville, S. C.  
 Owens, Jim, Easley Mill No. 1, Easley, S. C.  
 Painter, T. S., Overseer Spinning, Cowpens Mfg. Co., Cowpens, S. C.  
 Parrott, C. W., Carder and Spinner, Arcadia Mill, Spartanburg, S. C.  
 Patterson, M. L., Overseer Carding and Spinning, Consolidated Textile Corp., Shelby, N. C.  
 Perry, Hext M., Salesman, Detroit Graphite Co., Greenville, S. C.



# Leatheroid

Solid substantial and lasting, because of a combination of material and construction which has been developed out of nearly half a century of receptacle building experience.

The name Leatheroid covers a complete line of all types of receptacles used in factories, mills, warehouses, etc., for transporting and storing raw materials, parts, cuttings, scraps and waste.

Warehouse Cars

Roving Cans

Boxes

Barrels

Etc.

## ROGERS FIBRE COMPANY

Boston New York Philadelphia Charlotte, N. C.  
 121 Beach St. 78 Fifth Ave. 1024 Filbert St. 326 S. Church St.

Sold through Southern Supply Houses



## Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

—A—	Page	—K—	Page
Acme Sales Co.	—	Kaumagraph Co.	—
Akron Belting Co.	31	Keever Starch Co.	—
Allis-Chalmers Mfg. Co.	—	Kenilworth Inn	33
Aluminum Co. of America	Insert	—	—
American Bobbin Co.	26	Ladew, Edward R. Co.	—
American Cellulose & Chemical Mfg. Co., Ltd.	5	Lane, W. T. & Bros.	43
American Cotton Growers Exchange	—	Langley, W. H. & Co.	36
American Kron Scale Co.	—	Lawrence, A. C. Leather Co.	—
American Moistening Co.	25	Lavonia Mfg. Co.	27
American Textile Banding Co.	—	Leslie, Evans & Co.	26
Amory, Browne & Co.	36	Leaser-Goldman Cotton Co.	26
Arabol Mfg. Co.	—	Lestershire Spool & Mfg. Co.	—
Arkansas Cotton Growers' Co-operative Assn.	30	Lindley Nurseries, Inc.	38
Arnold, Hoffman & Co.	—	Link-Belt Co.	13
Ashworth Bros.	42	Lowell Shuttle Co.	—
Asiam, Inc.	25	—	—
Associated Business Papers, Inc.	—	Marston, Jno. P. Co.	—
Atlanta Brush Co.	—	Mathieson Alkali Works	—
Atlanta Harness & Reed Mfg. Co.	31	Mauney Steel Co.	—
—B—	—	Marrow Machine Co.	27
Bahnson Co.	1	Mocassin Bushing Co.	31
Bancroft, Jos. & Sons Co.	—	Moreland Sizing Co.	37
Barber-Colman Co.	32	Morse Chain Co.	43
Barber Mfg. Co.	—	—	—
Bell, Geo. C.	24	National Aniline & Chemical Co.	—
Bond, Chas. Co.	—	National Ring Traveler Co.	37
Borne, Strymer Co.	—	Neutrasol Products Corp.	—
Bosson & Lane	37	New Orleans Cotton Exchange	21
Boyd's City Dispatch	39	Newburger Cotton Co.	—
Bradley, A. J. Mfg. Co.	22	Newport Chemical Works, Inc.	6
Briggs-Schaffner Co.	44	N. Y. & N. J. Lubricant Co.	—
Brown, David Co.	26	—	—
Butterworth, H. W. & Sons Co.	3	Oakite Products, Inc.	—
Burkart-Schier Chemical Co.	19	—	—
—C—	—	Page Fence & Wire Products Assn.	34
Carrier Engineering Corp.	—	Page-Madden Co.	35
Catlin & Co.	37	Parker, Walter L. Co.	—
Charlotte Leather Belting Co.	44	Parks-Cramer Co.	—
Charlotte Manufacturing Co.	—	Penick & Ford, Ltd.	39
Chicago Belting Co.	—	Pennsylvania Hotel	39
Child, E. E. Co.	33	Perkins, B. F. & Sons, Inc.	—
Cocker Machine & Foundry Co.	—	Philadelphia Belting Co.	—
Collins Bros. Machine Co.	—	Polk, R. L. & Co.	—
Cook's, Adam, Sons	—	Reeves Bros., Inc.	36
Cooper-Hewitt Electric Co.	—	Roessler & Hasslacher Chemical Co.	33
Corn Products Refining Co.	43	R. I. Warp Stop Equipment Co.	24
Courtney, Dana S. Co.	—	Rice Dobby Chain Co.	25
Crompton & Knowles Loom Works	4	Rogers Fibre Co.	29
Crump, F. M. & Co.	32	Roy, B. S. & Son	—
Curran & Barry	36	—	—
Curtis & Marble Machine Co.	26	Saco-Lowell Shops	9
Cutler-Hammer Mfg. Co.	—	Schachner Leather & Belting Co.	25
—D—	—	Scott, Henry L. & Co.	26
Dary Ring Traveler Co.	32	Seaboard Ry.	—
Deering, Milliken & Co., Inc.	36	Sellers, Wm. & Co.	—
Denison Mfg. Co.	—	Seydel Chemical Co.	38
Diamond State Fibre Co.	35	Seydel-Woolley Co.	—
Dixie Mercerizing Co.	31	Shambow Shuttle Co.	—
Dixon Lubricating Saddle Co.	32	Siggers & Siggers	31
Drake Corp.	—	Sirrine, J. E. & Co.	44
Draper, E. S.	24	Slaughter, G. G.	—
Draper Corp.	—	Sonneborn, L. Sons	23
Dronfield Bros.	—	Sonoco Products	—
Dunning & Boschert Press Co., Inc.	25	Southern Ry.	—
Duplan Silk Corp.	—	Southern Spindle & Flyer Co.	—
DuPont de Nemours, E. I. & Co.	27	Southern Textile Banding Mill	32
—E—	—	Spaulding Fibre Co.	—
Eastwood, Benjamin Co.	—	Spray Painting & Finishing Equipment Sales Co.	37
Eaton, Paul B.	31	Stafford Co.	—
Eclipse Textile Devices, Inc.	—	Staley, A. E. Mfg. Co.	14
Economy Baler Co.	42	Steel Heddle Mfg. Co.	17
Emmons Loom Harness Co.	28	Stein, Hall & Co.	—
Entwistle, T. C. Co.	—	Stone, Chas. H.	37
—F—	—	Sydnor Pump & Well Co.	33
Fabreeka Belting Co.	25	—	—
Fales & Jenks Machine Co.	—	Taylor Instrument Companies	33
Farish Co.	24	Terrell Machine Co.	—
Ferguson Gear Co.	25	Textile Finishing Machinery Co.	—
Flexible Steel Lacing Co.	—	Textile Mill Supply Co.	2
Ford, J. B. Co.	34	Thomas Grate Bar Co.	31
Forster Machine Co.	—	Tice, J. T.	—
Fournier & Lemoine	—	Timken Roller Bearing Co.	—
Franklin Process Co.	—	Tolhurst Machine Works	—
Franklin Process Co.	—	Tripod Paint Co.	32
Fairbanks-Morse & Co.	11	—	—
—G—	—	United Chemical Products Co.	43
Garland Mfg. Co.	—	U. S. Bobbin & Shuttle Co.	15
Gaston County Dyeing Machine Wks.	—	U. S. Ring Traveler Co.	38
General Electric Co.	—	Universal Winding Co.	38
Georgia Webbing & Tape Co.	—	—	—
Glidden Co.	10	Victor Ring Traveler Co.	—
Graton & Knight Co.	—	Fred'k. Viotor & Achelis	24
Greist Mfg. Co.	38	Vogel, Joseph A. Co.	—
Hart Products Corp.	—	—	—
—H—	—	Washburn	—
H. & B. American Machine Co.	12	Watts, Ridley & Co.	37
Hollingsworth, J. D.	—	Wellington, Sears & Co.	36
Howard Bros. Mfg. Co.	2	Westinghouse Electric & Mfg. Co.	—
Howard-Hickory Co.	—	White, Fred H.	—
Hunt, Rodney, Machine Co.	31	Whitin Machine Works	—
Hyatt Roller Bearing Co.	—	Whitinsville Spinning Ring Co.	34
—I—	—	Wickwire-Spencer Steel Corp.	—
International Salt Co., Inc.	35	Williams, J. H. Co.	2
—J—	—	Wilts Veneer Co.	34
Jacobs, E. H. & Co.	—	Wolf, Jacques & Co.	—
—	—	Woodward, Baldwin & Co.	36

### Arkansas Cotton Growers' Co-operative Association Little Rock, Arkansas

An organization composed of 18,000 of the leading cotton producers in the States of Arkansas and Missouri.

C. G. HENRY, President

F. L. PAGE, Sales Manager

J. D. ELDRIDGE, Secretary

DOMESTIC

SHIPPERS

EXPORT

## MILL ITEMS

**Fayetteville, N. C.**—Arthur Priest, of Paterson, N. J., who has leased the building of the Hawthorne Silk Mills, as noted, will move equipment here for the manufacture of silk fabrics for lining caskets. He expects to install 100 more looms later.

**Greenville, S. C.**—Plans for improving and increasing the equipment of the American Spinning Company, recently purchased by the Florence Mills, Forest City, N. C., will be discussed at a meeting of the stockholders here on April 5.

**Gaffney, S. C.**—The Gaffney Manufacturing Company, electrically operated textile plant, is now obtaining its power from the Lockhart Power Company instead of from the South Carolina Gas and Electric Company, as heretofore. A large sub-station for "stepping down" the electric power is now being erected at the Gaffney plant.

**Ware Shoals, S. C.**—Contract for building an addition to the bleachery and bagging department of the Ware Shoals Manufacturing Company plant at Ware Shoals was awarded the Fiske-Carter Company, of Greenville, through J. E. Sirrine & Co., of this city, architects. The cost of the building was not made public.

The building will be four stories high at one point and only three at another. A total of 50,000 feet of floor space will be provided.

This project, it is understood, has no connection with the proposed \$1,000,000 addition for the mill.

Plans are being issued by the Sirrine Company for a material addition to the Oneida Mills at Graham, N. C., and contract for the work will be let soon.

**Lyman, S. C.**—Dyeing of cotton piece goods is to be begun at the Pacific Mills as soon as preparations for this phase of textile goods finishing can be completed, it was announced.

The dyeing to be done will be on a rather small scale for the present.

Edward S. Tillinghast, son of Prof. and Mrs. J. A. Tillinghast, of Spartanburg, will become overseer of dyeing when the work is begun in the near future in the bleaching house at Lyman, this work coming under the general supervision of Mr. Dean, bleachery supervisor. Mr. Tillinghast will probably leave in the next few days for Lawrence, Mass., where he will study for two or three weeks at the print works division of Pacific Mills to learn the latest methods and practices in dye work. Mr. Tillinghast, who has been assisting chemist in the bleachery, will be succeeded by L. G. Trimmer, also a native of Spartanburg.

The dyeing work to be started at Lyman will consist for the present of simple styles of shirtings, percales and possibly some work for export, Mr. Little said. Machinery for the work is being shipped from the Pacific print works division at Lawrence, Mass.

Philip, Robert W., Associate Editor, Cotton, Atlanta, Ga.

Power, S. R., Supt., Chadwick-Hoskins Mill, Pineville, N. C.

Quinn, Peter P., Draper Corp., Atlanta, Ga.

Rakestraw, S. P., Salesman, National Gum and Mica Co., Athens, Ga.

Ray, Geo. W., Overseer Spinning, New England-Southern Mills, Pelzer, S. C.

Ritch, L. S., Overseer Spinning, Shelby Mill, Shelby, N. C.

Rogers, W. F., Overseer Spinning, Glendale, S. C.

Sanders, J. W., Overseer Spinning, Beaumont Mfg. Co., Spartanburg, S. C.

Sanders, M. C., Greenville, S. C.

Shelton, C. M., Spinner, Buffalo Mfg. Co., Buffalo, S. C.

Smith, A. E., Overseer Spinning, Easley Mill No. 1, Easley, S. C.

Smith, Sam, Shelby Cotton Mills, Shelby, N. C.

Smith, S. B., Overseer Spinning, Inman Mill, Inman, S. C.

Smith, W. E., Overseer Spinning, Easley Mill No. 2, Liberty, S. C.

Smith, W. T., Spinner, Poinsett Mill, Greenville, S. C.

Sorrels, J. A., Jr., Salesman, N. Y. & N. J. Lubricant Co., Greenville, S. C.

Sparl, J. H., Second Hand Carding, Molloy Mill, Newberry, S. C.

Street, A. H., Night Overseer, Alexander Mfg. Co., Forest City, N. C.

Sullivan, O. A., Asst. Supt., Gaffney Mfg. Co., Gaffney, S. C.

Summer, E. S., Newberry, S. C.

Summey, S. A., Supt., Alexander Mfg. Co., Forest City, N. C.

Taylor, C. D., Sales Agent, National Ring Traveler Co., Gaffney, S. C.

Taylor, L. E., Rep., National Ring Traveler Co., Charlotte, N. C.

Thompson, A. E., Overseer Carding, Buffalo Mill, Buffalo, S. C.

Thompson, D. D., Overseer Spinning, Norris Mill, Catechee, S. C.

Thompson, L. L., Spinner, Woodside Mill, Greenville, S. C.

Thomason, L. W., Sou. Agent, N. Y. & N. J. Lubricant Co., Charlotte, N. C.

Thompson, J. T., Spinner, Oakland Mill, Newberry, S. C.

Thompson, W. H., Overseer Cloth Room, Courtney Mfg. Co., Newry, S. C.

Toms, J. P., Supt., Eastside Mfg. Co., Shelby, N. C.

Vaughan, W. P., Salesman, U. S. Ring Traveler Co., Providence, R. I.

Waits, W. K., Overseer Spinning, Greenwood Mill, Greenwood, S. C.

Waldrop, F. W., Overseer Spinning, Drayton Mill, Spartanburg, S. C.

Wentworth, Philip C., Treas., National Ring Traveler Co., Providence, R. I.

Widdup, W. R., Salesman, Andrews Loom Reed & Harness Works, Spartanburg, S. C.

Wigington, J. T., Asst. Marketing Specialist, U. S. Dept. of Agriculture, Clemson College, S. C.

Wikle, J. R., Mgr., Consolidated Textile Corp., Shelby, N. C.

Wilkins, Jack, Salesman, Greenville, S. C.

Williams, Jim, Salesman, Spartanburg Mill Supply Co., Spartanburg, S. C.

Wofford, L. E., Night Supt., Inman Mills, Inman, S. C.

Young, A. W., Salesman, Carolina Specialty Co., Charlotte, N. C.



## PATENTS

### Trade Marks and Copyrights

Difficult and rejected cases specially solicited. No misleading inducements made to secure business. Over thirty years active practice. Experienced, personal, conscientious service.

Write for terms. Address  
**SIGGERS & SIGGERS**  
Patent Lawyers  
Suite 34 N. U. Washington, D. C.

## PATENTS

### Trade-marks, Copyrights

A former member of the Examining Corps in the United States Patent Office. Convenient for personal interviews.

**PAUL B. EATON**  
Registered Patent Attorney  
Offices:  
406 Independence Building  
Charlotte, N. C. Telephone 2173  
and  
903 Grant Place N. W.  
Washington, D. C.

## William and York Wilson

Incorporated

### Cotton Brokers

Rock Hill, S. C.

Representing reliable shippers throughout the cotton belt.

## Moccasin Bushing's

are  
GUARANTEED

To STOP  
LOOSE PULLEY  
TROUBLES

THIS SPOT  
IS THE END OF A  
WHITE PINE PLUG  
PLACED IN THE  
BUSHING WALL  
IN THIS MANNER



OIL FROM THE RESERVOIR  
FILTERS THROUGH THE  
CAPILLARY PLUGS AND FORMS A  
FILM ON THE BEARING'S INNER SURFACE  
**MOCCASIN BUSHING CO.**  
Chattanooga Tenn.

## Textile Wet Finishing Machinery

Water Power Equipment  
Rolls—Wood, Metal, Rubber

**RODNEY HUNT MACHINE COMPANY**  
33 MILL STREET ORANGE, MASS.

## "ATLANTA" HARNESS

"Quality and Service  
That Satisfies"

**ATLANTA HARNESS  
& REED MFG. CO.**

ATLANTA, GA.  
P. O. Box 1375  
Telephone Main 0517

## Development of New Principles in Ring Traveler Construction

(Continued from Page 14)

standing still. Now, it is possible to observe in minute detail exactly what is happening; clear understanding takes the place of conjecture. By the use of this machine it was discovered that the traveler in its new form was practically "floating" with the ring simply acting as a guide resulting in a minimum of friction. Perhaps it might be well to add at this point that the basic theory of the ring and traveler, was for the traveler to "float," and the ring to guide same with only a slight bearing and the pull on the yarn was to be entirely governed and controlled by the weight of the traveler itself, consequently, the insistence on accuracy of weights.

The gradual advance and intensification of spinning, the coming of finer sizes and smaller circles, has caused the traveler to "ride" the ring flange, thus upsetting the basic theory. The changes in traveler construction which have herewith been described are enlisting the deep interest of manufacturers and textile engineers. It is gratifying to note that many of the leading manufacturers of the South have thoroughly investigated the merits of these improvements and are now using travelers in the new form extensively. This interest has been manifested because of the fact that figuratively speaking, the ring traveler has been in the dusty closet of neglect for nearly sixty years. This statement is being made not unmindful of the manufacturing refinements which have been brought about in order to keep pace with the development of the art of ring spinning, but rather, to focus attention on the lack of research and the development of advanced ideas and new principles.

In carefully reading the stenographic reports of discussions at spinners' conventions, it has been noted that details such as weights, flanges and circles, have been concentrated upon with the consequent ignoring of much more important subjects. It cannot be too emphatically pointed out that such elements as are mentioned above are absolutely under manufacturing control, and in order to meet almost every conceivable condition there has been built up a range of styles and sizes in ring travelers to a number in excess of ten thousand. Therefore, it is respectfully suggested that the practical manufacturer and the spinner can spend some time profitably in giving attention to some of the fundamental aspects of travelers.

In the past ten or fifteen years there has been tremendous progress made in the science of metallurgy. Wonderful new irons and steels have been developed to meet modern and exacting conditions. A certain amount of investigation work has proven that some of this advance in metallurgical science can be applied to the manufacture of ring travelers. One result is a new base material which is so superior in its inherent qualities that it is practically devoid of soft and hard

## "Akron" Leather Belting

Backed by More Than 40  
Years of Satisfactory  
Service and  
OUR GUARANTEE



Most Economical for

All Textile Mill

Machinery

Manufactured and Sold only by

## The Akron Belting Company

AKRON, OHIO

Incorporated 1885

Greenville, S. C.  
L. L. HASKINS  
P. O. Box 241

Opelika, Ala.  
M. H. WHATLEY  
111 Eleventh St.

## Thomas W-S-D Grate Bars

"PROVE THEIR WORTH"

"The W-S-D Grate Bars have proven quite satisfactory to us. The fact that we continue to order the bars is prima facie evidence that we consider them satisfactory."

P. H. HANES KNITTING CO.,

Winston-Salem, N. C.

THOMAS W-S-D Grates have real merit and are used by representative concerns in all sections. Let us submit proposal with full data for your plant.

**THOMAS GRATE BAR CO., Birmingham, Ala.**



**Dixie Mercerized Yarns**  
give you  
**Certified Satisfaction**

**DIXIE MERCERIZING COMPANY**  
Spinners and Processors  
CHATTANOOGA, TENNESSEE



Established 1896

Incorporated 1923

**F. M. CRUMP & Co.**  
INC.**COTTON MERCHANTS**

MEMPHIS, U. S. A.

D. H. CRUMP, President  
H. B. POTTS, Vice-PresidentJ. C. WILLIAMSON, Vice-President  
C. H. TAYLOR, Ass't. Sec'y & Treas.**THE TRIPOD PAINT COMPANY**

—MANUFACTURERS—

ATLANTA GEORGIA

MILL WHITES, PAINTS, STAINS, Etc.

Write for Prices and Free Samples

BVC

TRADE MARK

**BARBER-COLMAN COMPANY**

GENERAL OFFICES AND PLANT

ROCKFORD, ILL. U.S.A.

FRAMINGHAM, MASS.

GREENVILLE, S.C.

WARP TYING MACHINES HAND KNOTTERS

WARP DRAWING MACHINES

AUTOMATIC SPOOLERS HIGH SPEED WARPERS

**DARY TRAVELERS**

If it's a DARY Ring Traveler, you can depend on it that the high quality is guaranteed—that the weight and circle is always correct, and that all are uniformly tempered which insures even running, spinning or twisting.

Ask for prices

**DARY RING TRAVELER COMPANY**311 Somerset Ave.  
JOHN E. HUMPHRIES  
Greenville, S. C.Fred H. Dary, Mgr.  
—Sou. Agents—Taunton, Mass.  
CHAS. L. ASHLEY  
Atlanta, Ga.**SOUTHERN TEXTILE BANDING MILL**

Box 44, Charlotte, N. C.

Manufacturers of Double Loop Hook Banding for Cards,  
Spinning, Twisters and Spoolers.MODEL J  
Cuts 1/4 in. Letters  
& Lines—Any Length**Bradley Stencil Machines**Cut 1/2 in., 3/4 in., 1 1/4 in., and  
1 1/2 in. Letters

OVER 30,000 IN USE  
DROP FORGED STEEL PUNCHES  
ALL PARTS INTERCHANGEABLE  
MACHINES SENT ON TRIAL  
FREIGHT PAID BY US BOTH WAYS  
ROUND AND HORIZONTAL  
MODELS

Mark Your Shipments Right—Buy a  
BradleyA. J. BRADLEY MFG. CO.  
105 Beekman St. New YorkBradley  
Oil Stencil BoardBradley's  
Two-in-One  
Stencil InkThe Bradley  
Ball Stencil PotShippers' Supplies  
Write for Samples  
and PricesDixon's Patent Reversible and Locking in Back Saddle with New Oiling  
Device, three Saddles in one, also Dixon's Patent Round Head Stirrup.

Send for samples to

**DIXON LUBRICATING SADDLE CO.**

Bristol, R. I.

places when drawn into a great multiplicity of sizes of wire. The gratifying result of this is, that this new material, which is now called relevant metal, responds to the various manufacturing processes to a greater degree of accuracy, thereby giving a greater uniformity of weights. It also responds to the heat treating with a greater degree of uniformity, the results being that the travelers are stronger and tougher as well as smoother and better finished product. For years one of the chief difficulties of the traveler manufacturer has been to obtain a material devoid of soft and hard places; a metal with such imperfections when used resulted in a wide discrepancy in weights, heat treating defects, etc., therefore, it is strongly urged upon spinners as a whole, that they concentrate to a much greater degree upon ring traveler fundamentals rather than those details which are under perfect control. Bear in mind that progress is continually being made in metallurgy and that as wonderful things as are being accomplished in the heat treating of steel today, this science is only in its infancy.

A thorough investigation into the cause of the "loading" of a traveler has demonstrated that "loading" can be reduced and sometimes eliminated within the traveler itself. This is a feature of utmost importance because a "loaded" traveler is the main reason for a great many spinning troubles. While the change in heat treating and the resulting greater stability has discounted this important point, we still think that the anti-loading feature is one of vital importance and one that can be capitalized at a tremendous advantage. Realizing these facts, which are indisputable, it is not unreasonable to assume that the ring traveler of the future will be vastly superior to the one of the past. In this situation as in every other line of advanced endeavor, we must have the interest and earnest co-operation of the manufacturer and spinner in order to bring better things to pass.

**Cotton Goods Sales Exceed Production**

During the eight months from July to February, last, inclusive, sales of cotton goods reported by mills to the Association of Cotton Textile Merchants of New York were 24 per cent greater than production reported to that association in the same period. Total sales reported were 2,140,168,000 yards, as compared with total reported production of 1,763,074,000 yards.

Shipments amounting to 1,876,247,000 yards, also exceeded production.

These reports cover the manufacture and sale of more than 200 different classifications of standard cotton cloths, representing a large part of the total production of such goods in the United States.

The increase in sales since last July was also accompanied by a reduction of 37 per cent in stocks on hand. On July 1, stocks totalled 305,245,000 yards. On February 28, stocks amounted to 192,392,000 yards. Unfilled orders increased more

than 140 per cent in this period. July 1, unfilled orders amounted to 187,837,000 yards. At the end of February they were 451,788,000 yards.

**Georgia Association Meets April 19th**

Atlanta, Ga.—The twenty-seventh annual convention of the Cotton Manufacturers' Association of Georgia will be held at Georgia Tech on April 19, according to plans formulated at a meeting of the officers, directors and former presidents of the association recently in the Capital City Club. It is planned to arrange the program in connection with the activities of the textile department of Tech.

"It is the desire of the association and the executive of the school to bring out a better understanding between the mills and school, and in order that they may be of the greatest possible service to each other," said Thomas M. Forbis, secretary, in announcing the plans.

"The textile department of Tech can be of great assistance to the Georgia mills in matters of laboratory testing and research work, and the mills offer excellent opportunities to students graduating from the textile department. It is our plan to map out an intensive program whereby the school and the mills may co-operate more effectively," Mr. Forbis said.

Several Tech graduates who now are mill executives will be asked to take part in the program, as well as many other prominent men in the textile industry. Through the courtesy of H. S. Busby, director of the A. French Textile School at Tech, a special program will be put on by the students of that department. The visiting mill men will be given an opportunity to go through the textile school and make a thorough inspection of the equipment and facilities.

George S. Harris, president of the association; Dr. Brittain and Mr. Busby were instrumental in making the arrangements for the meeting.

**Textile Chemists To Meet**

The Southern Section, now referred to as the Piedmont Section by the Journal, of the American Association of Textile Chemists and Colorists will hold its spring meeting at the Poinsett Hotel, Greenville, S. C., on Saturday evening, April 16, 1927.

In announcing the meeting the arrangements committee says:

"Dr. Ira Remsen, one of the leaders in the development of chemistry in America, died recently; Prof. C. S. Doggett, of the Clemson Agricultural College, will review his accomplishments in this field.

"Apparently there is no more hosiery made out of one fiber only; H. Grady Miller, of the Elliott Knitting Mills, Hickory, N. C., should command the close attention of those present with his paper, 'One and Two-Color Effects on Multi-Fibered Hosiery.'

"There is a constant increase in the number of closed dyeing machines being used in the South; W.



**Kenilworth Inn**

ASHEVILLE, N. C.

*Special Weekly Rates*

Spend your spring vacation with the wild flowers of the Smoky Mountains.

The famous Kenilworth Inn offers you a special weekly rate for your family—which includes a marvelous program of entertainment.

Listen in on WWNC any evening

**AMERICAN PLAN with meals**

Single Room—hot & cold water	\$42.00 Up
Double " " " "	80.00 "
Single " —Private Bath	60.00 "
Double " " " "	90.00 "
Double & Single " " "	126.00 "

*Delightful, dignified surroundings*

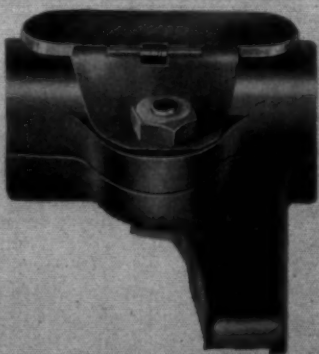
Further information upon request.

**ROSCOE A. MARVEL**  
MANAGER

**WELL DRILLING AND DEEP WELL PUMPS**

We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.

**SYDNOR PUMP & WELL Co., Inc.**  
Richmond, Va.

**Shaft-Box Oil Cover**

For Any Loom

Prevents Grit Entering Bearings.

Eliminates Clogged Oil Holes and Damaged Shafts.

Prevents Cloth Being Damaged by Flying Oil When Loom is Cleaned.

Attached in One Minute.

Made of .32 Non-Corrosive Tegnite to Fit Any Loom Shaft-Box. Price 20 Cents Each, f. o. b. Spartanburg. 2% Ten Days. Added 3% Discount Quantities of 1,000 or More.

Send Upper Half of One Shaft-Box to Insure Fit.

Folder on Request.

**E. E. Child Company**  
Spartanburg, S. C.

W. Puckett, of the Southern Franklin Process Company, of Greenville, S. C., who is admirably qualified to do so, will read a paper on 'Package Dyeing in Closed Machines.'

"Most of the cotton piece goods that are not dyed, and many of them that are, are bleached before being used; H. W. Ormand, of the Union Bleachery, of Greenville, S. C., one of the closest students of cotton goods finishing in this country, will present a paper on 'The Bleaching of Cotton Piece Goods.'"

**Importance of Cost Accounting**

Isaac L. Langley, cost accountant at the Consolidated Textile Corporation, Lynchburg, Va., gave four lectures on cost accounting during Textile Week at the North Carolina State College last week. He spoke on "Items of Expense to Include in Costs," "Distribution of Expenses to Departments," "Calculation of Departmental Costs," "Calculation of Fabric Costs."

"A uniform system of cost accounting in cotton mills is, in my opinion, the greatest single need of the industry. A mill should know at all times what it is costing to produce each number of roving, yarn, and fabric. Thus the cost of producing new yarns and fabrics may be predetermined; and in prosperous times a loom layout arranged that will give the maximum profit,—in times of depression, the minimum loss," said Mr. Langley.

"A mill should be carefully studied before any system of cost accounting is installed. Once a suitable system is set up, it is inexpensive to operate, and serves both the operating and selling departments," he stated.

"I strongly advocate the calculation of costs on a normal full time basis, thereby obtaining figures which may be used as standards, against which actual costs may be compared each period. In the system that we are to study expenses and labor are distributed to the various departments of the mill on legitimate bases; that is, labor on a pay roll basis; power on a power consumed basis; supplies charged directly to department using them, etc. When this has been done, accurate departmental costs may be obtained, which are necessary in calculating fabric costs, and useful for checking the actual costs of the department from period to period.

"The Cotton-Textile Institute will, no doubt, give out information regarding what items of expenses to include in costs, etc. Let us give this organization our one hundred per cent co-operation. I am confident that it is destined to do a great work for the industry," Mr. Langley said.

**Cotton Carnival.**

Asheville, N. C.—Nineteen pretty girl students at David Millard High School, wearing all-cotton costumes, appeared as the headline attraction in the Cotton Carnival staged at the school auditorium in connection with the widespread movement to encourage the use of cotton goods to better the South's economic condition.

**BLEACHERS!**

"My bleach is better than yours".—

"How do you get that way?"—

"Well; my Solozone—white is fast:

I do not injure the fibre.

I cut out Seconds.

My goods don't yellow.

They are soft and elastic".—

"You win; but mine costs much less".—

"Wrong again. Couldn't sell much if it did:"

I'll turn out three lots to your one,

My labor is about one-third,

So is my water and steam and

Cost of equipment.

I bet we'll split even on cost".—

**THE ROESSLER AND HASSLACHER CHEMICAL CO.**

713 Sixth Avenue

New York

**Tycos Automatic Control on Size Box**

**TYCOS** controls on the Size Box accomplish two fundamental operations. Maintains the same level of the size at all times; assures a uniform immersion of the yarn. At the same time, the level being maintained, the temperature of the size will be held at the most efficient operating point. These two factors being constant, the result will be size of uniform density and maximum penetration.

Upon penetration and density depend the uniformity of weight so desirable in the finished goods.

Write for complete information

**Taylor Instrument Companies**

ROCHESTER, N. Y., U. S. A.

Canadian Plant  
Tycos Building  
Toronto

Manufacturing Distributors  
in Great Britain  
Short & Mason, Ltd., London



## at the next board meeting



## make PROTECTION an item of business

The safeguarding of industrial property against trespass and more malicious intrusion is an item of business deserving the utmost attention.

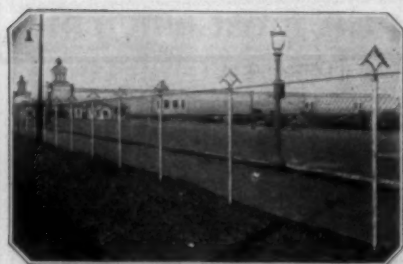
At the next directors meeting, consider carefully the permanent economical protection afforded by Page Chain Link Fence. Buildings, material and tools are safe behind this impassable barrier. Intruders are kept at a distance and fire hazard lessened.

Page Fence is constructed sturdy and strong to give many years of service. Copper-bearing steel, heavily galvanized after weaving. Fittings as well are zinc coated to resist rust.



## General Equipment Company

1411 South Mint St.  
Post Office Box 412  
Charlotte, N. C.



## PAGE Chain Link FENCE

## Obtaining Managerial Control By Disclosing Abnormal Factors of Cost

(Continued from Page 8)

spent than you ought not to have spent; where you spent the excess, and how much less product you made than you ought to have made? I think I know what you would want to know, because I believe you will want to control your cost with the idea of reducing your cost.

Present conditions in regard to costing, as they now exist in cotton mills, may be accounted for as follows:

In the first place, the average mill executive has become so accustomed to waiting until the end of a quarter, or even the end of a fiscal year for his auditor to give him a statement showing the results of the operations of the mill, and containing facts which in relation to the time in which they actually occurred, have long passed into history—that the average mill, executive has over-estimated the value of these kinds of reports and the information to be derived from them.

In the second place, executives knowing as they do little about the technical features of cost accounting, have gained the impression that cost information of such a nature that will aid them in management must rise to the surface, so to speak, through some sort of a bookkeeping scheme of debits and credits, the size and volume of which is in direct ratio to the value of the information desired. They, therefore, do not expect anything of real value to come very quickly from the accounting department. They have neither the time or the patience to wait until books and accounts are balanced inventories taken, and statements prepared. They also see no practical value in these numerous methods and theories of determining the cost and allocating expenses to the cost of the various operations of the mill. They know full well from experience that when this accounting data is finally assembled as a whole, that it will be of little value as an aid in increasing production, and in lowering the cost if that cost is excessive. There is no doubt about the fact that from the standpoint of management, cost accounting in the past has been suffering from entirely too much accounting.

Instead, therefore, of showing you how it is possible by various and sundry bookkeeping methods to get the cost of making cotton goods, I am going to try to show you how it is possible weekly by mechanical methods to get out of the expenses at least so you can see them in each important operation of the mill; those expenses which either did not assist in getting the production obtained or which exceeded the necessary weekly requirements in this respect. In other words, I am going to try to show you how it is possible to disclose abnormalities in both production and expenses in a cotton mill, and how it is possible to do so practically entirely by mechanical means and without the direct aid of double entry bookkeeping.

By taking out of the expenses, weekly, those expenses which are either abnormal or which did not assist either directly or indirectly in

getting the production, we arrive at the weekly expense necessary, or required, to get the actual production obtained. They would represent what is known as a normal, or standard, cost, and when divided by the actual production obtained, would give as a result a normal or standard cost per pound. These exceptional, abnormal or unusual cost items, whichever you prefer to call them, are then classified as to cause and made to stand out clearly by a practical arrangement which I will later show you on the lantern slides, so that the executive may make use of them from the standpoint of management in applying corrective measures. They are known as variations.

All variations will be found to fall under one of the two following classes:

First: Variations due to increases or decreases in actual expenditures as against the normal requirements in this respect, the latter being determined either by established policies or by past performances.

Second: Variations due to getting a subnormal production.

Under the first heading would be shown, for instance, among others, the following:

1. Variations due to increases in payroll rates.
2. Variations due to increases in the number of employees.
3. Variations due to increases in taxes, insurance, salaries and other overhead items.

Under the second heading would be shown, for instance, among others, the following:

1. Variations due to the payment of labor, overhead, etc., on that portion of the production anticipated, but not realized.

Thus, for illustration, suppose spinning is paid by the side, and in amount is equal to \$.08 per spindle. If the production for a week of 55 hours falls below normal to an amount equal to the production of, say 500 spindles, there is a variation in labor due to loss in machine or labor efficiency; 500 x \$.08 or \$40.00. Again, suppose 500 looms during a 55 hour week are getting a subnormal production and the amount of the deficiency in production is equal to the normal production of 30 looms. If the normal overhead rate is \$.50 per loom per week, there is an overhead deficiency or variation of \$240.00, which in reality represents payments in insurance, taxes, etc., on idle machinery. And, let us suppose that 50 additional looms were put into operation at all during the week of 55 hours, the variation in cost of these few looms alone would be \$250.00 per week.

By a few forms, ranging in number from three to seven or eight, depending upon conditions, and by the use of one of the several varieties of calculating machines now on market, both the normal and the actual operation or department of a cotton mill, as well as the variations and the causes for the variations, can be quickly determined. They can be determined by much less expenditure of time and effort than is now being expended in the average mill office in keeping track of ordinary manufacturing expenses by the old pen and ink method, and which produces little or real value to the mill executive as a guide to

Appearance is the first thing that attracts attention to textile fabrics.

A beautiful design will show to greater advantage by the superior finish which the

## WYANDOTTE TEXTILE ALKALIES

impart to textile fabrics.

Ask your supply man or write our technical expert



The J. B. FORD CO., Sole Mfrs  
Wyandotte, Michigan

## SPINNING RING SPECIALISTS FOR MORE THAN FIFTY YEARS

SPINNING RINGS  
TWISTER RINGS  
SILK RINGS

DIAMOND FINISH  
TRAVELLER CLEANERS  
TRAVELLER CUPS  
GUIDE WIRE SETS

WHITINSVILLE  
SPINNING RING CO.  
WHITINSVILLE, MASS.

## Save in freight by using WILTS Veneer Packing Cases

They are lighter and stronger, made of perfect 3-ply Veneer Packing Case Shooks. A saving of 20 to 30 pounds in freight on every shipment because of extreme lightness. Stronger than inch boards, burglarproof, waterproof and clean. Write for prices and samples. Convincing prices—Quick service. Wilts Veneer Co., Richmond, Va.



proper control and supervision. A number of the mills in the South operating from 500 to 800 looms, are now disclosing the amount of these variations weekly. They are doing so without any additional office help in from 8 to twenty hours.

Mill executives may want to consider the amount of these variations as a part of the cost of the product made. But, as a matter of fact, they are no more a cost of making the product than a contribution to a local church would be a cost of making the product.

It is immaterial, however, whether or not these irregular or abnormal expenditures be added to the cost of the product in general, or whether or not they are charged directly to profit and loss or to surplus. If they can be better recovered through the medium of sales by adding them to the cost of the product, so much the better.

It is not so much a question of how these variations should be treated from an accounting standpoint as it is a question of whether or not their existence and the cause for their existence is known and defined. It is extremely doubtful that a mill executive would not know of the existence of a large contribution to a local church. His records are usually arranged so that such an expenditure will stand out quite clearly. But, to what extent does he know about these other contributions? These contributions due to abnormal expenditures. These contributions due to subnormal production. Are his records arranged in such a manner that these contribution can also be readily and accurately determined.

### Knitting of True Rib Fabric

(Continued from Page 10)

the pattern mechanism which is now a permanent part of practically all ribbers.

The need of striped color effects brought out the striper attachment, changing from one color to another by means of fingers operating at the yarn feeding point with combined shear and clamp to hold the idle yarn. This attachment, when used on a single feed round frame, required one bobbin to rotate where it could not be under the control of the stopping-off arrangement, therefore, needing the watchful eye of the operator lest a bobbin run out and machine fail, causing delay in starting up again.

When two colors were in use for a time, the usual result was to have more changes in color. However, success in this line had to wait for some time, but the point has been reached at last. Now, changes in color can be made up to five different colors. Each yarn has the advantage of the stop-off gear in case the change fails or bobbins run out. Quite a departure from the established custom took place in the development of this device. The change is made by tying different colors together at the back of the machine entirely free from the knitting unit. All the bobbins rest on stationary rack, avoiding danger of tangling. The yarn passes through the stop-off gear, up over a compensating guide, then down to the knitting head, using the fixed method

of knitting ribbed fabric just as in the case of a plain single feed ribber with no obstruction to the view of the operator of any of the needles or of the knitting unit.

By separating the operation of yarn changing from the actual knitting unit, this being possible only through the use of the knot tying principle, there remains untold possibilities for application of this device, both circular and flat knitting machines.

The present day style trend, due to the great competition in merchandising, has brought out a never ending demand for colors and pattern changes. This demand has, in turn, made every builder of knitting machines concentrate on attachments, devices and entire new mechanisms for giving the fabric results desired. Among the machines which have been recently brought out is the 'Multi-Design True Rib machine which gives ninety colors vertically, for colors horizontally, practically without limitation to pattern. The multi-design true rib machine has ninety stationary bobbins, each one of these threaded through a finger giving pattern control of as many needles. The product has all the elasticity of the plain machine with the additional color and pattern quality. Horizontal stripes are made by the striping attachment forming the background for the designs which can take the form of vertical stripes, diamonds, block, circle, etc., of such colors or as many colors as desired up to the limit.

The machine which has just been described has the general appearance of being complicated merely because so many colored bobbins strike the line of vision, but a close analysis shows the extreme simplicity of the mechanical movements of the machine. Operators with average common sense and mechanical sense familiar with the operation of the regular knitting machines have found no difficulty in mastering this machine. After the method of developing and producing a given pattern has been learned, no complications arise. The pattern itself is governed by an auxiliary chain on the side of the machine which works in harmony with the primary horizontal striping chain producing the horizontal color effects and governing the length of the article produced.

### Macara Says Cotton Trade Needs Figures

London, Eng.—"The only thing that will put the cotton trade right is to obtain statistics of production, consumption, and stocks, and regulate supply to demand, instead of distributing throughout the world our capital and the revenue from our manufacturing and exporting industry, a condition brought about by sheer mismanagement," asserted Sir Charles Macara, in an interview recently.

According to Sir Charles Macara, there has been a great deal of talk about foreign competition, but if people would only read the authoritative statements on this subject published during the past 20 years they would see that there was nothing to fear.

# Diamond Fibre

## RECEPTACLES for INDUSTRY

Roving Cans	Gill Cans	Bobbin Boxes
Doffing Cars	Trucks	Mill Boxes, Baskets
Barrels	Waste Hampers	Shipping Boxes

DIAMOND STATE FIBRE CO. - Bridgeport, Pa.

Offices in the principal Cities and in Canada

Celoron products are Manufactured and Sold by the Celoron Co., a separate Division of the Diamond State Fibre Co.

## INTERNATIONAL

### SALT CRYSTALS

Facts are essential to efficient industrial operation. Particularly valuable are those facts which affect the conduct of processes.

"International" has, naturally, acquired many facts concerning the use of salt which are valuable to industrial users. This knowledge is gladly shared through the cooperation extended by "International" service.

INTERNATIONAL  
SALT COMPANY, Inc.  
475 Fifth Avenue, New York

## THE SUPERIOR PORCELAIN

for

## Textile Machinery

manufactured by

## Page-Madden Co.

Incorporated

277 Ralph Ave.,  
Brooklyn, N. Y.

Samples and Catalog upon Request



No. 654



No. 344



No.  
E-4



# SELLING AGENTS for SOUTHERN COTTON GOODS

## Deering, Milliken & Co., Inc.

79-83 Leonard Street  
New York

99 Chauncy St., Boston

223 Jackson Blvd., Chicago

## Leslie, Evans & Company

39-41 Thomas St.

New York

Selling Agents for Southern Mills  
Sheetings, Print Cloth, Drills, Twills, Ducks

## W. H. LANGLEY & CO.

COMMISSION MERCHANTS

57. Worth St.

New York

Sole Selling Agents For

Langley Mills, Seminole Mills, Aiken Mills, Anderson Cotton Mills,  
Strickland Cotton Mills, Moultrie Cotton Mills, Poulton Cotton Mills,  
Royal Cotton Mills

## WOODWARD, BALDWIN & CO.

Established 1828

43 and 45 Worth Street, New York

Selling Agents for

Southern Cotton Mills

Baltimore  
St. Louis

Philadelphia  
San Francisco

Boston  
Chicago

St. Joseph  
Shanghai (China)  
Minneapolis

## Wellington, Sears & Company

93 Franklin St., Boston

66 Worth St., New York

Philadelphia  
Atlanta

Chicago  
New Orleans

St. Louis  
San Francisco

Dallas

## Amory, Browne & Co.

Specializing in Selling Cotton Mill Products

BOSTON, 48 Franklin St.

62 Worth St., NEW YORK

Our Export Department Serves 69 Foreign Countries

## CURRAN & BARRY

320 Broadway  
New York, N. Y.

## REEVES BROTHERS, INC.

55 Leonard Street, New York  
Philadelphia office: Drexel Building New England office: Middleton, Conn.

Selling Agents for the following Mills:

Cotton Yarns, Combed Peeler, Carded Singles and Ply, Audrey Spinning Co.  
Weldon, N. C., Mandeville Mills, Carrollton, Ga., Mills Mill, No. 2, Woodruff, S. C.,  
Wabena Mills, Lexington, N. C., White Hall Yarn Mills, White Hall, Ga.,  
Grey Goods, Print Cloth, Twills, Sheetings, Pajama Checks, Arcadia Mills,  
Spartanburg, S. C., Clinton Cotton Mills, Clinton, S. C., Hermitage Cotton Mills,  
Camden, S. C., Mills Mill, Greenville, S. C., Osage Mfg. Co., Bessemer City, N. C.

## Cotton Goods

New York.—The cotton goods markets were quieter during the week, but prices held steady, due to the large orders received recently by the mills, the strong cotton market and the small stocks being carried by the mills. The movement of goods from the mills continued very heavy, the large orders placed during the past three months being reflected in high production and shipments.

Trade in print cloths and sheetings was not as large as during some recent weeks, but prices were strong. The demand for colored goods continued good and the volume of business done in recent months for both domestic and foreign trade is the largest in the past three years. Prices on denims, cottonades, low end goods and other colored goods were very firm.

There was an active trade in wash goods, the best demand being for printed fabrics, and cotton and rayon and cotton and silk mixtures. Business in towels was quiet, due to increased production on these goods in recent weeks.

Substantial sales of 820 print cloth yarn goods were made at 4% cents and 4% cents for long and regular cuts for deliveries carrying as far ahead as June. Buyers included shade manufacturers, converters and the surgical trades. Spots of 72x76s sold at 9% cents, with some houses asking 1/4 cents higher. Some spots of 68x72s sold at 7% cents, with most sellers asking 8 cents. Spots of 60x48s sold at 6% cents and May deliveries at 6 cents. This month's deliveries of 64x60s brought 6% cents, with spots held at 7 cents. Narrow 64x60s sold at 4% cents. Sales of 27-inch 14.75 yard goods were made at 2% cents.

There has been comparatively little doing in sheetings during the week. Mill prices have not changed, although several sellers have intimated their interest in getting propositions. For 31-inch, 5.00 yard, 5% net is considered the market; 5.50 yard sold at 5% net; 6.15 yard, 44x40 count, sold in small lots, spot, at 5 1/4 net. Later contracts on the 7 squares count at one-eighth had been reported; 37-inch, 48 squares, 4.00 yard at 7% to one-quarter, depending upon the make; 56x60, 4.00 yard at 8 net for spot and nearby, and one-eighth less for contract; 40-inch, 3.60 yard sold at 9% net; second hands sold spots of 40-inch, 2.85 yard, this week, at 10% net.

A number of mills have considerable jacquard brassiere cloth business in hand and have been forced to refuse additional commitments this side of September. Some of

these cottons are rayon decorated and are being brought out in entirely new effects. In several quarters activity in this field has been described as far less than normal, converters finding they have failed to move the quantities they expected they would.

The situation in carded broadcloths has maintained most of its recent firmness, despite the fact that interest is not as broad as it was several weeks ago. Quick shipments of 100x60 in first hands are not readily found and are held at 11 cents. March sold in second hands at 11, and April at 10 1/4 cents. First hands continue to ask 10 1/4 on spots of 90x60, and 10 1/4 reported for second week in May.

On 128x68 all-combed contracts of choice makes starting almost at once, are reported at 16 1/2 cents. For 144x76 singles, commencing in May, 18 1/2 cents quoted on best makes; 19 to 19 1/4 for spots.

During the past few days a limited number of smaller orders were placed. Tire dealers are taking larger quantities of various sizes and qualities of tires and justifying mills in increasing their manufacturing schedules, though their inventories are on the increase also.

Having bought liberally for forward delivery the heavy goods manufacturers are comfortably supplied and the filling-in business coming forward is naturally small. The automobile fabric business is less buoyant, although tire fabrics are being made on order in substantial quantities.

Hand-to-mouth trading has been the rule in the Fall River print cloth market for the week, with spot and nearby deliveries prevailing. Neither buyers nor sellers have shown any particular interest in contracts, consequently the amount of future business taken has been very small. Prices have held firm and continue on about the same basis as last week. The week's sales are estimated at 85,000 pieces.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x64s.	5 1/4
Print cloths, 28-in., 64x60s.	5
Print cloths, 27-in., 64x60s.	4 1/4
Gray goods, 38 1/2-in., 64x64s.	7 1/2
Gray goods, 39-in., 68x72s.	8
Gray goods, 39-in., 80x80s.	10 1/4
Brown sheetings, 3-yard.	10
Brown sheetings, 4-yard,	
56x60s.	8 1/4
Brown sheetings, stand.	11
Tickings, 8-oz.	18 a 19 1/2
Denims.	14 1/4
Staple gingham, 27-in.	9
Kid finished cambrics.	8 1/2 a 9
Dress gingham.	12 1/2 a 16 1/2
Standard prints.	8

### Southeastern Selling Agency

## LESSER-GOLDMAN COTTON COMPANY

OF ST. LOUIS, MO.

P. H. PARTRIDGE, Agent, Charlotte, N. C.

Extra staples, and good 1 1-16 and 1 1/2 cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.



# The Yarn Market

Philadelphia, Pa.—The yarn market continued on a slow basis during the week. With few exceptions, business was limited to small filling-in orders where carded yarns were concerned. Spinners made no change in their prices, quotations being firm with a tendency to go higher. Buyers continued to delay purchases. Many of them are said to believe that present production of yarns is so high that stocks will accumulate within a short time and prices will go lower. Spinners contend that prices are not showing any appreciable profit and that the difficulty of securing good cotton at prices in keeping with yarn prices is making the extremely difficult. The firm course of cotton has aided spinners in their price attitude and they are not expecting lower yarn prices.

Combed yarns were reported as fairly active during the week. Spinners on combed counts are well sold for the several weeks and are maintaining quoted prices.

The recent large business in cotton goods is expected to have a favorable effect on the yarn situation within a short time.

February sales, in pounds, was below that of January, but above that of February, 1926. Thus far March sales, in pounds, have exceeded those of the preceding month, but are below the total sales reported for January. The money volume of sales for the first quarter of this year, dealers say, falls very considerably under that of the like period last year.

The average price of four representative market list here is generally lower than spinners' quotations:

Southern Two-ply Warps.	
8s	25
10s	25 1/2
12s	26 1/2
14s	27
16s	28
20s	29
24s	32
26s	33
30s	36
40s	45
40s ex.	49
Southern Two-ply Skeins.	
8s	25
10s	25 1/2
12s	26
14s	27
16s	28
20s	29
24s	31 1/2
26s	33
30s	35
36s	42
40s	44 1/2
40s ex.	49
50s	56
Tinged Carpet	3 and 4ply 20
White Carpet	3 and 4ply 24
Southern Single Chain Warps.	
10s	25
12s	26
14s	27
16s	28
20s	29
24s	31 1/2
26s	32
30s	36
40s	46

Southern Single Skeins.	
6s	24 1/2
8s	25
10s	26
12s	27
14s	28
16s	29 1/2
20s	29
22s	31
24s	32
26s	33
30s	35 1/2
Southern Frame Cones.	
8s	24 1/2
10s	25
12s	26
14s	27
16s	26 1/2
18s	27
20s	27 1/2
22s	28
24s	29
26s	30
28s	31
30s	31
30s*	31 1/2
40s	43
Southern Combed Peeler Skeins, Etc.—Two-ply.	
16s	40
20s	41
24s	49
36s	50
40s	53
50s	59
60s	67
70s	79
80s	89
Southern Combed Peeler Cones.	
10s	34 1/2
12s	35
14s	36
16s	37
18s	38
20s	39
22s	40 1/2
24s	42
26s	43
28s	44
30s	46
32s	46
34s	48
36s	49
38s	53
40s	54
50s	61
60s	66

## Southern Spinners' Bulletin

The weekly bulletin of the Southern Yarn Spinners' Association says: Conditions in the yarn market remain unchanged. The Government spinning report has apparently had no stimulating effect on yarn purchases. Spinners' prices are firm at an advance over dealers' quotations, and business is confined to hand-to-mouth buying.

The Association of Cotton Textile Merchants of New York has just published a report covering business for the eight months period, July, 1926, to February, 1927, inclusive, which shows a healthy condition in the piece goods trade. Sales for the period exceeded production by 21 per cent, with a 37 per cent reduction in stocks, while unfilled orders at the end of the period show an increase of 140 per cent over unfilled orders of July 1.

With this healthy condition in the piece good market, it is reasonable to expect that the yarn market should show a like condition once demand is stimulated.

CHAS. H. STONE  
DYESTUFFS AND CHEMICALS  
CHARLOTTE, N. C.  
Over Twenty-two Years Experience

**CATLIN & COMPANY**  
NEW YORK BOSTON PHILADELPHIA CHICAGO  
Commission Merchants  
Cotton Cloth and Cotton Yarn  
SOUTHERN OFFICE:  
910-11 Commercial Bank Bldg. CHARLOTTE, N. C.

## WENTWORTH Double Duty Travelers

Last Longer, Make Stronger Yarn, Run Clear, Preserve the SPINNING RING. The greatest improvement entering the spinning room since the advent of the HIGH SPEED SPINDLE.

Manufactured only by the  
**National Ring Traveler Co.**  
Providence, R. I.  
31 W. First Street, Charlotte, N. C.



## RIDLEY WATTS & Co.

COMMISSION MERCHANTS

40-46 Leonard Street NEW YORK CITY

### Branch Offices

Chicago

St. Louis

Philadelphia

Baltimore

Boston

## Moreland Size, Inc.

"The Warps Best Friend"

Moreland Sizing Company

Established 1908

Office: 206 Andrews Low Bldg.

Spartanburg, S. C.

S. C. THOMAS & J. T. MORELAND, Owners

## UNIFORM IN APPLICATION

**Victrolyn**

Reg. U. S. Patent Office

A dependable assistant in sizing Cotton Warps

SOLE MANUFACTURERS

**Bosson & Lane**

Works and Office, Atlantic, Mass.

**SPRACO**  
Painting

1. Lower upkeep cost.
2. Less interference with production.
3. Time saved when painting.

This should interest you. Write for Bulletin 102

Spray Painting & Finishing Equipment Sales Co.  
60 High Street Boston, Mass.

## Want Department

### For Sale

- 1 Beam Warp Dyeing Machine complete
- 1 Four-burner 46" Gas Singer with Frilling Folder
- 1 Gas Generating Machine
- 1 Sixty-foot Clip Tenter and Winder (Textile Fin. Mch. Co.)
- 1 Wet Finishing Range, two compartment, washing box water mangle, and starch mangle.
- 1 Hydraulic Baling Press with pump

Also large assortment electric motors, shafting, pulleys, and hangers. Equipment practically new. Address L. G. M., care Textile Bulletin.

### For Sale or Rent

for manufacturing purpose. City block 300x300. Main building on property brick 100x150, also metal construction building 75x100 and four-room tenant house. Private water system, 7,500 gallon tank. Conveniently located for oil mill or other manufacturing. Located in good town with water, sewerage and lights. Good railroad and highway connections. Price or rental will be satisfactory to right parties. J. D. Lancaster, Pinetops, N. C.

### Wanted—Draper Looms

40 Draper Looms, 40" E Model, auxiliary shafts, equipped for 8" bobbins. Acworth Mills, Acworth, Ga.

### Men Wanted For Southern Mills

We have inquiries from Southern Mills for the following men: Superintendent for silk, and silk and cotton fancy mixed goods; overseer cotton spooling, warping, slashing, dressing and warp preparation departments, colored cotton goods; fixer automatic jacquard looms, \$45; cotton card grinder; overseer finishing and napping colored cotton goods; boss dyer cotton piece goods; master mechanic; woolen loom fixer; foreman finishing and putting up room in bleachery. We shall be pleased to send one of our application blanks to any one seeking employment in Southern mills. Charles P. Raymond Textile Service, 294 Washington St., Boston.

We Render Confidential Service to Employers Looking for Men and Men Looking for Positions.

### For Sale—Speeders

- 7 Lowell frames, 152 spindles each, 5½" space, 8" traverse, 8"x3½" bobbins; 3 right and 4 left hand.

Also

- 1 16x42 L. H. Hardie-Tynes Corliss Engine.
  - 1" portable Firth card stripping machine.
  - 134 ft. 36" double leather belt.
- Acworth Mills, Acworth, Ga.

**MAKE YOUR WANTS KNOWN**  
Through The  
Bulletin Want Department  
Read in More than 95% of the  
Southern Textile Mills  
Rate: \$1.50 per inch per insertion

## Make an Investment in Appearance

*Cheerful Grounds make Cheerful Workers*

**LINDLEY NURSERIES, Inc.**

Pomona, N. C.

*Nurserymen—Landscape Architects*

## WANTED

To Sell—?  
To Buy—?  
To Exchange—?  
Employment—?  
Help—?

"Want Ads" in the SOUTHERN TEXTILE BULLETIN Get

## RESULTS

Rates: \$1.50 per inch per insertion

# GREIST

Plain O Free R Send us I We will  
Coppered O from O a sample R quote  
Nickel Plated O or E you  
Rust Proof M burrs P drawing S Prices

THE GREIST MFG. CO.

New Haven, Conn.

Southern Representative:  
James McCabe  
Box 573, Greenville, S. C.

## UNIVERSAL WINDING CO. BOSTON

### Textile Winding Machinery

#### Southern Offices

Charlotte, N. C.

Frederick Jackson

I. E. Wynne

Atlanta, Ga.

Jesse W. Stribling

Factory Office, Providence, R. I.



## Ring Traveler Specialists U. S. Ring Traveler Co.

159 Aborn Street, PROVIDENCE, R. I.

ANTONIO SPENCER, President AMOS M. BOWEN, Treasurer

WM. P. VAUGHAN, Southern Representative

P. O. Box 792

GREENVILLE, S. C.

U. S. Ring Travelers are uniformly tempered which insures even-running spinning. They are also correct as to weight and circles. Quality guaranteed.



The more the Textile Industry learns about Sizol Service the better it appreciates its value in successful weaving.

**SEYDEL CHEMICAL COMPANY**  
Jersey City, N. J.

Dallas, Texas,  
2016 N. Lamar St.,  
W. H. Gibson

Greenville, S. C.,  
P. O. Box 336,  
Phone 7104  
W. W. Greer



## EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is \$2.00 which will also cover the cost of carrying a small advertisement for two weeks.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only \$1.00.

During the three months' membership we send the applicant notices of all vacancies in the position which he desires and carry small advertisements for two weeks.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as overseer carding. Would prefer job where card room is in very bad condition. 28 years old, married and have family. A-1 references as to character and ability. No. 5120.

WANT position as overseer weaving. Experienced and can furnish the best of references. No. 5121.

WANT position as master mechanic. 25 years experience in cotton mill shops. Can handle steam, water and electric drives and welding. Can give good references. No. 5122.

WANT position as overseer of spinning, or second-hand in large mill. 15 years experience in mill and 8 years as second-hand and overseer. Can give good references. No. 5123.

WANT position as overseer carding and spinning, or of carding. Long experience. Good references. No. 5124.

WANT position as overseer of card room in small mill, or second-hand in large mill. Good references. No. 5125.

WANT position as overseer spinning. 7 years experience as overseer of spinning; good experience in carding. I. C. S. graduate. Can change on short notice. No. 5126.

WANT position as overseer carding and spinning, or carding or spinning. Experienced. Can furnish good references. No. 5127.

WANT position as superintendent of cotton, carding, spinning and weaving. Have both practical and technical knowledge of cotton manufacturing. Now in charge of carding and spinning, and wish to change only for a better position. Can furnish good references as to character and qualifications. No. 5128.

WANT position as chief engineer or master mechanic. Several years experience on both steam and electric power. Can handle machine shop in first class manner. Best of references. No. 5129.

WANT position as overseer spinning, or carding and spinning or superintendent of yarn mill. Experienced. Can furnish good references. No. 5130.

WANT position as overseer of weaving. No record, but ability to make one. Now employed as second hand. 32 years of age, married and have family. Reference as to character. No. 5131.

WANT position as overseer spinning, or large second hand job. Now running spinning at night but want day job. Can furnish good references. No. 5132.

WANT position as superintendent of yarn mill or plain weave mill. Would prefer a mill that is run down and needs bringing up. Good references. No. 5133.

WANT position as overseer carding, spinning, spooling, winding, warping and twisting. I. C. S. graduate. 13 years experience as overseer and assistant superintendent. 38 years of age. Best of references. No. 5134.

WANT position as overseer carding, or would accept carding and spinning at night. Overseer for 13 years. Experienced on combers and double carding. Can furnish good references. No. 5135.

WANT position as master mechanic. 12 years experience in steam, water and electric power, shop work, welding and ice making. Married. 35 years of age. Good references. No. 5136.

WANT position as superintendent, carder, or spinner, or overseer of carding and spinning. Best of references. No. 5137.

WANT position as superintendent of small or medium yarn mill, or as overseer carding and spinning in large mill. Ten years experience as overseer carding and spinning on all kinds of colored novelties and weaving yarn; also knitting yarns. Want place that pays at least \$36.00 per week. 31 years of age, married and have family. Can furnish good references as to my experience and ability. No. 5138.

WANT position as weave room overseer; either plain or fancy weave room. Several years experience on plain and fancy weaves, leno box weaves, and silk filled weaves. No. 5139.

WANT position as overseer of carding or spinning, or both carding and spinning. Now employed but wish to make a change. Can give the best of references. No. 5140.

WANT position as master mechanic. 12 years experience in cotton mill shops; 6 years in contract shop. Reasonable salary. No. 5141.

WANT position as superintendent. Could change on thirty days notice. Good references. No. 5142.

WANT position as roller coverer. 12 years experience. 27 years of age, single and strictly sober. Can take charge as foreman. A-1 references. No. 5143.

WANT position as overseer weaving, slashing, spooling and warping in some mill east of Mississippi River. Can run any job on Draper looms, 2-3-3-4-5-6 harness goods. Strictly sober. I. C. S. student and hustler for production and low seconds. Good references. No. 5144.

WANT position as superintendent of yarn mill. Have had long experience in carding and spinning and am confident can run a mill and make money. Have a good textile education and have made a successful overseer. Reliable and strictly sober. No. 5145.

WANT position as roller coverer and belt man. 22 years experience. 34 years of age, married, strictly sober and reliable. Can furnish good references and can change at once. No. 5146.

WANT position as superintendent of either yarn or weave mill. Would consider position as overseer of weaving in large mill. Good references. No. 5147.

WANT position as overseer of weaving, plain or fancy; overseer of spinning, medium numbers; or overseer of carding, medium numbers, white. Good references. No. 5148.

WANT position as overseer of weaving, or clothroom. 20 years practical experience. Graduate of I. C. S. 35 years of age and married. Now employed as overseer, but desire better position. Good references. No. 5149.

WANT position as overseer of weaving. 5 years experience and can furnish the best of references. No. 5150.

WANT position as superintendent. Experience not confined to any one or two departments, as is usually the case, but prior to promotion to superintendent's position, was successfully and successively overseer of carding, and of spinning and weaving. Good references. No. 5151.

WANT position as master mechanic. Can handle steam or electric plant. 42 years of age and have family. Good references. No. 5152.

WANT position as cotton grader. Can furnish good references. No. 5153.

WANT position as overseer of carding, day or night jobs, at \$30.00 or more per week. 34 years of age. 10 years experience in carding, and can guarantee quality and quantity. No. 5154.

## PHILADELPHIA

Chestnut and 39th Street

## Hotel Pennsylvania

Fireproof—Unrestricted Parking—Garage



OSCAR W. RICHARDS, Manager

600 ROOMS—500 BATHS

Rooms with running water from \$2.50 per day

Rooms with private bath and shower from \$3.50 per day

*Food and Service the Best*

Near West Philadelphia Station Pennsylvania Railroad  
University of Pennsylvania—Franklin Field

## The Foundation of Advertising Is The List

Over 50,000 national and local advertisers are using Boyd's Lists in building business by Direct Advertising.

Send for a copy of Boyd's 1927 leaflet of Dry Goods and kindred Lists, giving State figures on the following:

43,719 Dry Goods and Department Stores, U. S., price	\$100.00
23,864 Dry Goods worth over \$5,000	60.00
19,178 Dry Goods worth over 10,000	50.00
9,769 Dry Goods worth over 50,000	35.00
3,893 Dry Goods worth over 100,000	15.00
198 Dry Goods (Headquarters) with 3 or more Branches	5.00
2,971 Dry Goods located in Canada	25.00
1,668 Dry Goods Wholesale	10.00
747 Dry Goods, Exporters	6.00
54,154 Retail Clothiers and Men's Furnishers	150.00
30,844 Retail Clothiers worth over \$5,000	85.00
8,212 Sporting Goods Dealers	50.00
5,900 Sporting Goods worth over \$5,000	35.00
6,536 Department Stores	7.50
1,385 Army and Navy Stores	7.50
2,961 Five and Ten Cent and Similar Stores	7.50
272 Five and Ten Cent Buying Headquarters	4.00
5,193 Variety and Racket Stores not duplicating with Five and Ten	20.00
7,925 Retail Women's Furnishings not duplicating with Department Stores	35.00

Our Catalogue No. 56 contains 8,000 Lists. Ask for a copy. Names of any kind—any place—any quantity.

## Boyd's City Dispatch

Established 1830

Edgar J. Williams, Manager

Office: 114-120 East 23rd Street, New York City  
Receiving and Shipping Departments: 115-119 East 22nd St.

Direct Mail Service of Addressing, Mailing, Letters, to above Lists.



# CLASSIFIED LIST OF ADVERTISERS

**Air Conditioners—**  
American Moistening Co.  
The Bahnsen Co.  
Carrier Engineering Co.  
Parks-Cramer Co.  
R. I. Humidifier and Ventilating Co.

**Albion—**  
The Roessler & Hasslacher Chemical Co.

**Architects and Mill Engineers—**  
Sirrline & Co., J. E.

**Ash Handling Equipment—**  
Link-Belt Co.  
**Automatic Feeds for Cotton—**  
Saco-Lowell Shops  
Whitlin Machine Works.

**Automatic Spoolers—**  
Barber-Colman Co.  
T. C. Entwistle Co.

**Automatic Stop Motion—**  
Eclipse Textile Devices Co., Inc.  
**Automatic Yarn Cleaner—**  
Eclipse Textile Devices, Inc.

**Ball Bearing—**  
Charles Bond Company

**Balers—**  
Dunning & Boschert Press Co., Inc.  
Economy Baler Co.

**Baling Presses—**  
Dunning & Boschert Press Co., Inc.  
Economy Baler Co.

**Bands and Tape—**  
American Textile Banding Co.

**Baskets—**  
Charles Bond Company  
W. T. Lane & Bros.  
Wickwire Spencer Steel Co.

**Beaming and Winding Machinery—**  
Barber-Colman Co.  
Cocker Machinery & Foundry Co.  
Draper Corporation.  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.  
Saco-Lowell Shops

**Beam Heads—**  
T. C. Entwistle Co.  
Saco-Lowell Shops

**Beams (Section)—**  
Washburn

**Beams (All Steel)—**  
T. C. Entwistle Co.  
Saco-Lowell Shops

**Beaming Combs—**  
T. C. Entwistle Co.  
Easton & Burnham Machine Co.  
Steel Heddle Mfg. Co.

**Bearings (Roller)—**  
Charles Bond Company

**Bearings (Shaft)—**  
Charles Bond Company  
William Sellers & Co., Inc.  
Woods, T. B. & Sons Co.

**Bearings (Textile Machinery)—**  
Charles Bond Company

**Belt Conveyors—**  
Link-Belt Co.  
Wickwire Spencer Steel Co.

**Belt Conveyors (Spiral and Woven)—**  
Wickwire Spencer Steel Co.

**Belt Fasteners—**  
Flexible Steel Lacing Co.

**Belt Tighteners—**  
Charles Bond Company  
Link-Belt Co.  
Woods, T. B. & Sons Co.

**Belting—**  
The Akron Belting Co.  
Charles Bond Company  
Charlotte Leather Belting Co.  
Chicago Belting Co.  
Druid Oak Belting Co.  
Graton & Knight Co.  
Edward R. Ladew Co.  
Fabreeka Belting Co.  
Philadelphia Belting Co.  
Schachner Leather & Belting Co.

**Belt Cement—**  
Charles Bond Company  
Graton & Knight Co.  
Edward R. Ladew Co.

**Belt Dressing—**  
Charles Bond Company  
Graton & Knight Co.

**Belt Lacing—**  
Charles Bond Company  
Chicago Belting Co.  
Graton & Knight Co.  
Edward R. Ladew Co.

**Belting (Link)—**  
Charles Bond Company  
Link-Belt Co.  
Morse Chain Co.

**Bicarbonate of Soda—**  
Mathieson Alkali Works, Inc.

**Bleacheries—**  
Joseph Bancroft & Sons Co.

**Bleaching Chemicals—**  
The Roessler & Hasslacher Chemical Co.

**Bleaching Materials—**  
Arabol Mfg. Co.  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
Bosson & Lane  
J. B. Ford Co.  
United Chemical Products Corp.

**Seydel Chemical Company**  
L. Sonneborn Sons, Inc.  
United Chemical Products Co.

**Wolf, Jacques & Co.**  
**Bobbin Holders—**  
Fournier & Lemoine

**Bobbins and Spools—**  
American Bobbins Co.  
David Brown Co.  
Courtney, Dana S. Co.  
Draper Corporation  
Lestershire Spool & Mfg. Co.  
Lowell Shuttle Co.  
Walter L. Parker Co.  
Steel Heddle Mfg. Co.

**Boxes—**  
Wilts Veneer Co.

**Box Shooks—**  
Wilts Veneer Co.

**Blowers and Blower Systems—**  
Carrier Engineering Co.  
Parks-Cramer Co.

**Breton Mineral—**  
Borne, Scrymser Co.

**Brushes—**  
Atlanta Brush Co.  
Curtis & Marble Machine Co.

**Brushing Machine—**  
Curtis & Marble Machine Co.

**Bobbin Stripper—**  
Terrell Machine Co.

**Brooms—**  
Pioneer Broom Co.

**Bushings (Bronze)—**  
Moccasin Bushing Co.

**Calenders—**  
H. W. Butterworth & Sons Co.  
B. F. Perkins & Son, Inc.  
Textile Finishing Machinery Co.

**Calendar Roll Grinders—**  
B. S. Roy & Son Co.

**Cards—**  
Saco-Lowell Shops  
Whitlin Machine Works  
Woonsocket Machine & Press Co., Inc.

**Card Clothing—**  
Ashworth Bros.  
Charlotte Mfg. Co.  
Howard Bros. Mfg. Co.  
Wickwire Spencer Steel Co.

**Card Grinding Machinery—**  
Dronsfeld Bros.  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.  
Roy, B. S. & Son Co.  
Saco-Lowell Shops  
Whitlin Machine Works  
Woonsocket Machine & Press Co., Inc.

**Card Stripper—**  
Abington Textile Machinery Works

**Carrier Aprons—**  
Link-Belt Co.  
Wickwire Spencer Steel Co.

**Caustic Potash—**  
A. Kilpstein & Co.  
**Castings (Brass and Bronze)—**  
Moccasin Bushing Co.

**Caustic Soda—**  
Arnold, Hoffman & Co., Inc.  
A. Kilpstein & Co.  
Mathieson Alkali Works, Inc.

**Chain Belts and Drives—**  
Charles Bond Company  
Link-Belt Co.  
Morse Chain Co.  
The Whitney Manufacturing Co.

**Chemicals—**  
J. B. Ford Co.  
Hart Products Corp.  
A. Kilpstein & Co.  
Mathieson Alkali Works, Inc.  
Seydel Chemical Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons, Inc.  
United Chemical Products Corporation.  
Jacques Wolf & Co.

**Cleaning Agents—**  
Oakite Products, Inc.  
Jacques Wolf & Co.

**Cloth Presses—**  
Economy Baler Co.

**Clutches (Friction)—**  
Charles Bond Company  
Textile Finishing Machinery Co.  
Woods, T. B. Sons Co.

**Cloth Winders and Doublers—**  
Curtis & Marble Machine Co.

**Clutch Spindles—**  
Fournier & Lemoine

**Coal Handling Machinery—**  
Link-Belt Co.

**Combs—**  
Steel Heddle Mfg. Co.  
**Combs (Beamers, Warpers, Slashers)—**  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.

**Commission Merchants—**  
Catlin & Co.  
The Farish Co.

**Compressors (Air)—**  
Allis-Chalmers Mfg. Co.

**Condensers—**  
Allis-Chalmers Mfg. Co.

**Conditioning Machines—**  
American Moistening Co.

**Cones (Paper)—**  
Sonoco Products Co.

**Cone Vice Couplings—**  
William Sellers & Co., Inc.

**Controllers, Electric—**  
Cutler-Hammer Mfg. Co.

**Conveying Systems—**  
Link-Belt Co.

**Coolers (Air)—**  
See Humidifying Apparatus.

**Cotton—**  
Arkansas Cotton Grower's Co-operative Association.  
Lessor-Goldman Cotton Co.  
Newburger Cotton Co.  
Wm. & York Wilson.

**Cotton Machinery—**  
Ashworth Bros.  
Barber-Colman Co.  
Collins Bros. Machine Co.  
Crompton & Knowles Loom Works  
Dixon Lubricating Saddle Co.  
Draper Corporation  
T. C. Entwistle Co.

**Fales & Jenks Machine Co.**  
Foster Machine Co.  
H. & B. American Machine Co.  
Rodney Hunt Machine Co.  
National Ring Traveler Co.

**Roy, B. S. & Son**  
Saco-Lowell Shops  
Southern Spindle & Flyer Co.  
Stafford Co., The  
Terrell Machine Co.

**Tolhurst Machine Works**  
Universal Winding Co.  
Whitlin Machine Works  
Whitinsville Spinning Ring Co.  
Woonsocket Machine & Press Co., Inc.

**Cotton Openers and Lappers—**  
Saco-Lowell Shops  
Whitlin Machine Works  
Woonsocket Machine & Press Co., Inc.

**Cotton Softeners—**  
Arabol Mfg. Co.  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
Bosson & Lane  
Hart Products Corp.  
A. Kilpstein & Co.  
Seydel Chemical Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons, Inc.  
United Chemical Products Corporation.  
Wolf, Jacques & Co.

**Cotton Waste Machinery—**  
Saco-Lowell Shops  
Whitlin Machine Works  
Woonsocket Machine & Press Co., Inc.

**Couplings (Shaft)—**  
Charles Bond Company  
William Sellers & Co., Inc.  
Woods, T. B. Sons Co.

**Cranes—**  
Link-Belt Co.  
Dobby Chain—  
Crompton & Knowles Loom Works  
Rice Dobby Chain Co.

**Doering Boxes—**  
Rogers Fibre Co.

**Doublers—**  
Saco-Lowell Shops  
Textile Finishing Machinery Co.  
Universal Winding Co.

**Doublers (Yarn)—**  
Foster Machine Co.

**Drives (Silent Chain)—**  
Charles Bond Company  
Link-Belt Co.  
Morse Chain Co.

**Drop Wires—**  
Crompton & Knowles Loom Works  
Draper Corporation  
Hopedale Mfg. Co.  
R. I. Warp Stop Equipment Co.

**Dryers (Centrifugal)—**  
Roy, B. S. & Son Co.  
Tolhurst Machine Co.

**Dyeing, Drying, Bleaching and Finishing Machinery—**  
H. W. Butterworth & Sons Co.  
Cocker Machine & Foundry Co.  
Franklin Process Co.  
Perkins, B. F. & Sons, Inc.  
Rodney Hunt Machine Co.  
Textile Finishing Machinery Co.

**Dyestuffs and Chemicals—**  
Borne, Scrymser Co.  
Bosson & Lane  
E. I. du Pont de Nemours & Co., Inc.  
General Dyestuff Corporation.  
A. Kilpstein & Co.  
National Aniline & Chemical Co.  
Newport Chemical Works  
Chas. H. Stone  
United Chemical Products Corp.  
Wolf, Jacques & Co.

**Dye Works—**  
Franklin Process Co.  
**Electric Fans—**  
Allis-Chalmers Mfg. Co.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.

**Electric Hoists—**  
Allis-Chalmers Mfg. Co.  
Link-Belt Co.  
**Electric Lighting—**  
Allis-Chalmers Mfg. Co.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.

**Electric Motors—**  
Allis-Chalmers Mfg. Co.

**Charles Bond Company**  
General Electric Co.  
Westinghouse Electric & Mfg. Co.

**Electric Supplies—**  
Cooper-Hewitt Electric Co.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.

**Elevators—**  
Link-Belt Co.

**Engineers (Mill)—**  
See Architects and Mill Engineers

**Engineers (Ventilating)—**  
Bahnsen Co.  
Carrier Engineering Corp.  
Parks-Cramer Co.  
See also Ventilating Apparatus.

**Engines (Steam, Oil, Gas, Pumping)—**  
Allis-Chalmers Mfg. Co.  
Sydnor Pump & Well Co.  
Expert Textile Mechanic—  
J. D. Hollingsworth

**Extractors—**  
Tolhurst Machine Works

**Fences, Iron and Wire—**  
Page Fence and Wire Products Assn  
Wickwire Spencer Steel Co.  
Spaulding Fibre Co.

**Fibre Baskets—**  
Spaulding Fibre Co.

**Fibre Boxes—**  
Spaulding Fibre Co.

**Fibre Specialties—**  
Diamond State Fibre Co.  
Rogers Fibre Co.  
Spaulding Fibre Co.

**Finishing Compounds—**  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
Hart Products Corp.  
A. Kilpstein & Co.  
Seydel Chemical Company  
Seydel-Woolley Co.  
L. Sonneborn Sons Co.  
United Chemical Products Corp.  
Jacques Wolf & Co.

**Finishing Machinery—**  
See Dyeing, Drying, Bleaching and Finishing

**Flat Wall Paint—**  
E. I. du Pont de Nemours & Co., Inc.

**Floor Stands—**  
Wood's, T. B. Sons Co.

**Fluted Rolls—**  
Collins Bros. Machine Co.  
Fales & Jenks Machine Co.  
Saco-Lowell Shops  
Woonsocket Machine & Press Co., Inc.  
Whitlin Machine Works

**Flyer Pressers and Overhaulers—**  
Saco-Lowell Shops  
Southern Spindle & Flyer Co.  
Whitlin Machine Works  
Woonsocket Machine & Press Co., Inc.

**Flyers—**  
Saco-Lowell Shops  
Southern Spindle & Flyer Co.  
Whitlin Machine Works

**Frames—**  
Steel Heddle Mfg. Co.  
Friction Clutches—  
Wood's, T. B. Sons Co.  
See Clutches

**Garment Dyeing Machines—**  
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.  
Garnett Roll Grinders—  
B. S. Roy & Son Co.

**Gearing (Silent Flexible)—**  
Link-Belt Co.

**Gears—**  
Charles Bond Company  
Ferguson Gear Co.

**Gears (Silent)—**  
Charles Bond Company  
Ferguson Gear Co.

**Grate Bars—**  
Scraper Iron Works (McNaughton)  
Thomas Grate Bar Co.

**Grab Buckets—**  
Link-Belt Co.

**Greases—**  
Borne, Scrymser Co.  
N. Y. & N. J. Lubricant Co.  
L. Sonneborn Sons Co.  
United Chemical Products Corporation  
Jacques Wolf & Co.

**Gudgeon Rolls—**  
Easton & Burnham Machine Co.  
Roy, B. S. & Son Co.  
Washburn

**Hand Knotters—**  
Barber-Colman Co.

**Hand Stripping Cards—**  
Howard Bros. Mfg. Co.

**Hangers (Ball and Socket)—**  
Charles Bond Company  
William Sellers & Co., Inc.  
T. B. Wood's Sons Co.

**Hangers (Shaft)—**  
Charles Bond Company  
William Sellers & Co., Inc.  
Wood's, T. B. & Sons Co.

**Hardware Supplies—**  
Textile Mill Supply Co.

**Harness Twine—**  
Garland Mfg. Co.

**Harness and Frames—**  
See Heddles and Frames

**Heddles and Frames—**  
Garland Mfg. Co.  
Howard Bros. Mfg. Co.  
Steel Heddle Mfg. Co.  
L. S. Watson Mfg. Co.



# CLASSIFIED LIST OF ADVERTISERS

- High Speed Warpers—  
Barber-Colman Co.  
Hopper-Feed Hand Stokers—  
The J. H. Williams Co.  
Hosiery Dyeing Machines—  
Cocker Machine & Foundry Co.  
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.  
Humidity and Air Conditioning Apparatus—  
American Moistening Co.  
The Bahnson Co.  
Carrier Engineering Corp.  
Parks-Cramer Co.  
R. I. Humidifier & Ventilating Co.  
Humidity Controllers—  
American Moistening Co.  
The Bahnson Co.  
Carrier Engineering Corp.  
Parks-Cramer Co.  
R. I. Humidifier & Ventilating Co.  
Hydro-Extractors—  
Tolhurst Machine Co.  
Hydrogen Peroxide—  
The Roessler & Hasslacher Chemical Co.  
Hydrosulphites—  
Jacques Wolf & Co.  
Indigo Dyeing Machinery—  
H. W. Butterworth & Sons Co.  
Cocker Machine & Foundry Co.  
Textile Finishing Machinery Co.  
Knit Goods Finishing Machines—  
Kauamagraph Co.  
Marrow Machine Co., The  
Knitting Lubricants—  
Borne, Scrymser Co.  
Laundry Machinery—  
Tolhurst Machine Works  
Knotters—  
Barber-Colman Co.  
Marrow Machine Co., The  
Landscape Architect—  
E. S. Draper  
Leather Packings—  
Charles Bond Company  
Graton & Knight Co.  
Edward R. Ladew Co.  
Leather Loom Pickers—  
Charles Bond Company  
Graton & Knight Co.  
E. H. Jacobs Mfg. Co.  
Leather Strapping—  
Charles Bond Company  
Graton & Knight Co.  
Edward R. Ladew Co.  
Leather Straps—  
Graton & Knight Co.  
E. H. Jacobs Mfg. Co.  
Liquid Chlorine—  
Arnold, Hoffman & Co., Inc.  
Mathieson Alkali Works, Inc.  
Looms—  
Crompton & Knowles Loom Works  
Draper Corporation  
Hopedale Mfg. Co.  
Stafford Co., The  
Loom Drop Wires—  
Crompton & Knowles Loom Works  
R. I. Warp Stop Equipment Co.  
Steel Heddle Mfg. Co.  
Loom Harness—  
Atlanta Harness & Reed Mfg. Co.  
Garland Mfg. Co.  
Steel Heddle Mfg. Co.  
Loom Pickers—  
Charles Bond Company  
Garland Mfg. Co.  
Graton & Knight Co.  
E. H. Jacobs Mfg. Co.  
Edward R. Ladew Co.  
Loom Reeds—  
Atlanta Harness & Reed Mfg. Co.  
Steel Heddle Mfg. Co.  
Loom Supplies—  
Charles Bond Company  
E. H. Jacobs Mfg. Co.  
Lubricants—  
Adam Cooks Sons, Inc.  
Borne, Scrymser Co.  
N. Y. & N. J. Lubricant Co.  
L. Sonneborn Sons, Inc.  
United Chemical Products Corporation.  
Lug Straps—  
Charles Bond Company  
Graton & Knight Co.  
E. H. Jacobs Mfg. Co.  
Machinery Enamel—  
E. I. du Pont de Nemours & Co., Inc.  
Mangles—  
H. W. Butterworth & Sons Co.  
Textile Finishing Machinery Co.  
Markers—  
Kauamagraph Co.  
Measuring and Folding Machines—  
Curtis & Marble Machine Co.  
Textile Finishing Machinery Co.  
Mercerizing Machinery—  
H. W. Butterworth & Sons Co.  
Cocker Machine & Foundry Co.  
Textile Finishing Machinery Co.  
Metal (Non-Corrosive)—  
Aluminum Company of America  
American Nickel Corporation.  
Metal Paint—  
E. I. du Pont de Nemours & Co., Inc.  
Meters—  
Allis-Chalmers Mfg. Co.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.  
Mill Architects—  
—See Architects.  
Mill Lighting—  
—See Electric Lighting.  
Mill Starches—  
Arnold, Hoffman & Co., Inc.  
Corn Products Refining Co.  
Keefer Starch Co.  
Penick & Ford, Ltd.  
Stein, Hall & Co.  
United Chemical Products Corporation.  
Mill Supplies—  
Charles Bond Company.  
Dixon Lubricating Saddle Co.  
Garland Mfg. Co.  
E. H. Jacobs Mfg. Co.  
Textile Mill Supply Co.  
Thomas Grate Bar Co.  
Mill Trucks—  
Spaulding Fibre Co.  
Mill White—  
E. I. du Pont de Nemours & Co., Inc.  
Napper Clothing—  
Howard Bros. Mfg. Co.  
Wickwire Spencer Steel Co.  
Monopole Oil—  
United Chemical Products Corporation.  
Jacques Wolf & Co.  
Napper Roll Grinders—  
Allis-Chalmers Mfg. Co.  
General Electric Co.  
B. S. Roy & Son Co.  
Westinghouse Electric & Mfg. Co.  
Oils—  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
N. Y. & N. J. Lubricant Co.  
L. Sonneborn Sons, Inc.  
United Chemical Products Corporation.  
Wolf, Jacques & Co.  
Oils (Rayon)—  
Borne, Scrymser Co.  
Jacques Wolf & Co.  
Opening Machinery—  
H. & B. American Machine Co.  
Saco-Lowell Shops.  
Whitin Machine Works.  
Overhaulers—  
Saco-Lowell Shops.  
Southern Spindle & Flyer Co.  
Overseaming and Overedging Machines—  
Southern Spindle & Flyer Co.  
Marrow Machine Co.  
Paints—  
Aluminum Co. of America.  
The Glidden Co.  
Tripod Paint Co.  
Patents—  
Paul B. Eaton.  
Siggers & Siggers  
Perforated Machinery Guards—  
Wickwire Spencer Steel Co.  
Perforated Metals—  
Wickwire Spencer Steel Co.  
Picker Gears—  
Cocker Machinery & Foundry Co.  
Pickers (Leather)—  
Charles Bond Company.  
Garland Mfg. Co.  
Graton & Knight Co.  
E. H. Jacobs Mfg. Co.  
Edward R. Ladew Co.  
Pickers and Lappers—  
Saco-Lowell Shops.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Picker Sticks—  
Charles Bond Company.  
Garland Mfg. Co.  
Piece Dyeing Machinery—  
H. W. Butterworth & Sons Co.  
Cocker Machine & Foundry Co.  
Rodney Hunt Machine Co.  
Textile Finishing Machinery Co.  
Pipe and Fittings—  
Parks-Cramer Co.  
Portable Elevators—  
Link-Belt Co.  
Power Transmission Machinery—  
Allis-Chalmers Mfg. Co.  
Charles Bond Company.  
Hyatt Roller Bearing Co.  
Link-Belt Co.  
Morse Chain Co.  
William Sellers & Co., Inc.  
Preparatory Machinery (Cotton)—  
H. & B. American Machine Co.  
Saco-Lowell Shops.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Pinboards—  
Rodney Hunt Machine Co.  
Washburn.  
Porcelain Guides and Parts—  
Rodney Hunt Machine Co.  
Page-Madden Co., Inc.  
Presses—  
Economy Baler Co.  
Saco-Lowell Shops.  
Pulleys (Cast Iron)—  
Charles Bond Company.  
William Sellers & Co., Inc.  
Wood's, T. B. Sons Co.  
Pumps—  
Backmer Pump Co.  
Pumps (Boller Feed; also Centrifugal)—  
Allis-Chalmers Mfg. Co.  
Sydney Pump & Well Co.  
Presses—  
Collins Bros. Machine Co.  
Quill Boards—  
Washburn.  
Quillers—  
Crompton & Knowles Loom Works  
Eastwood, Benj. Co.  
Universal Winding Co.  
Whitin Machine Works.  
Quill Cleaners—  
Terrell Machine Co.  
Raw Stock Machines—  
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.  
Rayon Oils—  
United Chemical Products Corporation.  
Receptacles—  
Diamond State Fibre Co.  
Economy Baler Co.  
Rogers Fibre Co.  
Spaulding Fibre Co.  
Reels—  
H. W. Butterworth & Sons Co.  
Cocker Machine & Foundry Co.  
Rodney Hunt Machine Co.  
Rings—  
Saco-Lowell Shops.  
Whitinsville Spinning Ring Co.  
Ring Spinning Frames—  
Fales & Jenks Machine Co.  
H. & B. American Machine Co.  
Saco-Lowell Shops.  
Textile Finishing Machinery Co.  
Whitin Machine Works.  
Ring Travelers—  
Dary Ring Traveler Co.  
National Ring Traveler Co.  
Victor Ring Traveler Co.  
U. S. Ring Traveler Co.  
Roller Leather—  
A. C. Lawrence Leather Co.  
Roll Machines—  
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.  
Rolls—  
American Bobbin Co.  
H. W. Butterworth & Sons Co.  
Collins Bros. Machine Co.  
Fales & Jenks Machine Co.  
Rodney Hunt Machine Co.  
Saco-Lowell Shops.  
Southern Spindle & Flyer Co.  
Textile Finishing Machinery Co.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Rolls (Metal)—  
Rodney Hunt Machine Co.  
Rolls (Rubber)—  
Rodney Hunt Machine Co.  
Rolls (Wood)—  
Rodney Hunt Machine Co.  
Washburn.  
Roller Bearings—  
Charles Bond Company.  
Roving Cans—  
Spaulding Fibre Co.  
Roving Cans and Boxes—  
Rogers Fibre Co.  
Roving Machinery—  
Saco-Lowell Shops.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Saddles—  
Dixon Lubricating Saddle Co.  
Salt—  
International Salt Co.  
Sanitary Equipment—  
Vogel, Joseph A. Co.  
Sanitary Fountains—  
—See Drinking Fountains  
Scales—  
American Kron Scale Co.  
Scallop Machines—  
Marrow Machine Co., The.  
Scouring Powders—  
Bosson & Lane  
Denison Mfg. Co.  
Ford, J. B. Co.  
Scrubbing and Cleaning Powders—  
The Denison Mfg. Co.  
Sesquicarbonate of Soda—  
Mathieson Alkali Works, Inc.  
Selling Agents—  
Deering, Milliken & Co.  
Reeves Bros.  
Woodward, Baldwin & Co.  
Selling Agents (Cotton Goods)—  
Amory, Browne & Co.  
Curran & Barry.  
Deering, Milliken & Co.  
Hunter Mfg. & Commission Co.  
W. H. Langley & Co.  
Leslie, Evans & Co.  
Reeves Bros.  
Wellington, Sears & Co.  
Sewing Machines—  
Marrow Machine Co.  
Sewing Machines and Supplies—  
Curtis & Marble Machine Co.  
Shafting, Hangers, Etc.—  
—See Power Transmission Machinery.  
Shafting—  
William Sellers & Co., Inc.  
Shear Grinders—  
B. S. Roy & Son Co.  
Shell Rolls—  
Saco-Lowell Shops  
Washburn.  
Shell Stitch Machines—  
Marrow Machine Co.  
Shuttles—  
David Brown Co.  
Lowell Shuttle Co.  
Draper Corporation  
Shambow Shuttle Co.  
U. S. Robbin & Shuttle Co.  
L. S. Watson Mfg. Co.  
J. H. Williams, Co., The  
Silk Yarns (Artificial)—  
American Cellulose & Chemical Mfg. Co.  
Aslam, Inc.  
Duplan Silk Corp.  
E. I. du Pont de Nemours & Co.  
Industrial Fibre Co.  
Tubize Artificial Silk Co.  
Silent Chain Drive—  
Link-Belt Co.  
Morse Chain Co.  
Singeing Machinery—  
H. W. Butterworth & Sons Co.  
Textile Finishing Machinery Co.  
Sizing Machines—  
Charles B. Johnson.  
Saco-Lowell Shops  
Sizing Starches, Gums—  
Arnold, Hoffman & Co., Inc.  
Arabol Mfg. Co.  
Hart Products Corp.  
L. Sonneborn Sons, Inc.  
Stein, Hall & Co.  
United Chemical Products Corporation.  
Jacques Wolf & Co.  
Sizing Compounds—  
Arnold, Hoffman & Co., Inc.  
Bosson & Lane  
Corn Products Refining Co.  
Drake Corp.  
Hart Products Corp.  
A. Klipstein & Co.  
John P. Marston & Co.  
Seydel Chemical Co.  
Seydel-Woolley Co.  
United Chemical Products Corporation.  
Wolf, Jacques & Co.  
Skein Machines—  
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.  
Skewers—  
David Brown Co.  
Courtney, Dana S. Co.  
T. C. Entwistle Co.  
Walter L. Parker Co.  
U. S. Bobbin & Shuttle Co.  
Slashers—  
Charles B. Johnson.  
Saco-Lowell Shops.  
Slasher Combs—  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.  
Steel Heddle Mfg. Co.  
Textile Finishing Machinery Co.  
Slashers and Equipment—  
Saco-Lowell Shops.  
Soaps—  
Arabol Mfg. Co.  
Arnold, Hoffman & Co., Inc.  
L. Sonneborn Sons, Inc.  
United Chemical Products Corp.  
Soda Ash—  
J. B. Ford Co.  
Mathieson Alkali Works, Inc.  
Arabol Mfg. Co.  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons Co.  
U. S. Bobbin & Shuttle Co.  
United Chemical Products Corp.  
Wolf, Jacques & Co.  
Sodium Perborate—  
The Roessler & Hasslacher Chemical Co.  
Sodium Peroxide—  
The Roessler & Hasslacher Chemical Co.  
Softeners—  
Arabol Mfg. Co.  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons Co.  
United Chemical Products Corp.  
Jacques Wolf & Co.  
Softeners (Oil)—  
Arabol Mfg. Co.  
Borne, Scrymser Co.  
Bosson & Lane.  
Hart Products Corp.  
L. Sonneborn Sons, Inc.  
Seydel Chemical Co.  
United Chemical Products Corporation.  
Jacques Wolf & Co.  
Solozone—  
The Roessler & Hasslacher Chemical Co.  
Spindles—  
Collins Bros. Machine Co.  
Draper Corporation.  
Fales & Jenks Machine Co.  
Saco-Lowell Shops.  
Southern Spindle & Flyer Co.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Spindle Repairers—  
Collins Bros. Machine Co.  
Fournier & Lemoine.  
Fales & Jenks Machine Co.  
Saco-Lowell Shops  
Southern Spindle & Flyer Co.  
Spinning Frame Saddles—  
Dixon Lubricating Saddle Co.  
Spinning Frame Top Rolls—  
Saco-Lowell Shops  
Spinning Frame Top Rolls (Wood)—  
Washburn.  
Spinning Rings—  
Collins Bros. Machine Co.  
Draper Corporation.  
Fales & Jenks Machine Co.



## CLASSIFIED LIST OF ADVERTISERS

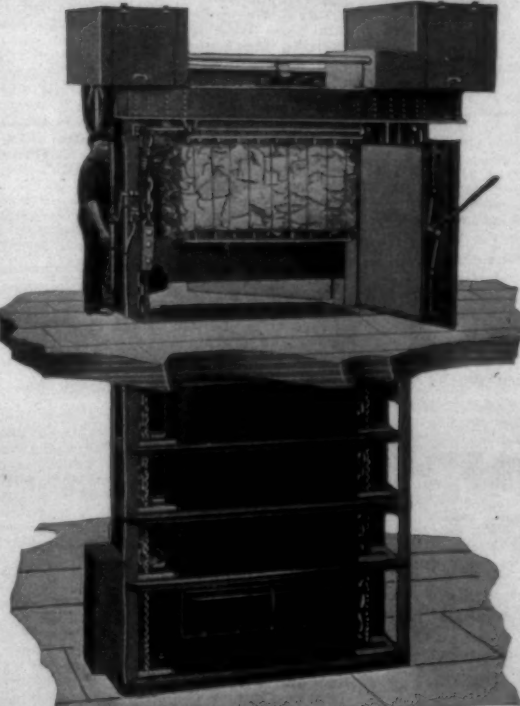
Saco-Lowell Shops.  
Whitin Machine Works.  
Whitinsville Spinning Ring Co.  
Spinning Tapes—  
American Textile Banding Co.  
Barber Mfg. Co.  
Georgia Webbing & Tape Co.  
Spoils—  
David Brown Co.  
Courtney, Dana S. Co.  
Lestershire Spool & Mfg. Co.  
Walter L. Parker Co.  
Steel Heddle Mfg. Co.  
U. S. Bobbin & Shuttle Co.  
Spoolers—  
Draper Corporation.  
Easton & Burnham Machine Co.  
Eastwood, Benj. Co.  
Saco-Lowell Shops.  
Whitin Machine Works.  
Spooler Tensions (Filling Wind)—  
Foster Machine Co.  
Sprockets—  
Cocker Machine & Foundry Co.  
Sprockets, Silent Chain—  
Link-Belt Co.  
Morse Chain Co.  
Squeeze Rolls—  
H. W. Butterworth & Sons Co.  
Rodney Hunt Machine Co.  
Textile Finishing Machinery Co.  
Starch—  
Arnold, Hoffman & Co., Inc.  
Corn Products Refining Co.  
Keefer Starch Co.  
Penick & Ford, Ltd.  
Stein, Hall & Co.  
United Chemical Products Corporation.  
Stencil Machines—  
A. J. Bradley Mfg. Co.  
Stencil Papers—  
A. J. Bradley Mfg. Co.  
Stripper Cards—  
Wickwire Spencer Steel Co.  
Sulphur Dyeing Machines—  
Klauder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.  
Tanks—  
H. W. Butterworth & Sons Co.  
Rodney Hunt Machine Co.  
Textile Finishing Machinery Co.  
Tape—  
Georgia Webbing & Tape Co.  
Temperature, Regulators, Pressure—  
Powers Regulator Co.  
Taylor Instrument Co.  
Temples—  
Draper Corporation.  
Textile Apparatus (Fabric)—  
B. F. Perkins & Son, Inc.  
Henry L. Scott & Co.  
Textile Castings—  
H. W. Butterworth & Sons Co.  
Cocker Machinery & Foundry Co.  
Textile Finishing Machinery Co.  
Textile Dryers—  
American Moistening Co.  
Textile Gums—  
United Chemical Products Corporation.  
Jacques Wolf & Co.  
Textile Machinery Specialties—  
H. W. Butterworth & Sons Co.  
Cocker Machinery & Foundry Co.  
Rodney Hunt Machine Co.  
Textile Finishing Machinery Co.  
Textile Soda—  
J. B. Ford Co.  
Matheson Alkali Works.  
Thermometers—  
Powers Regulator Co.  
Taylor Instrument Co.  
Top Rolls For Spinning Frames—  
Saco-Lowell Shops.  
Washburn.  
Trademarking Machines—  
Curtis & Marble Machine Co.  
Transfer Stamps—  
Kaumagraph Co.

Transmission Belts—  
Charles Bond Company.  
Graton & Knight Co.  
Edward R. Ladew Co.  
Transmission Machinery—  
Allis-Chalmers Mfg. Co.  
William Sellers & Co., Inc.  
Wood's T. B. Sons Co.  
Toilets—  
Vogel, Jos. A. Co.  
Transmission Silent Chain—  
Link-Belt Co.  
Morse Chain Co.  
Trucks (Mill)—  
W. T. Lane & Bros.  
Rogers Fibre Co.  
Trucks For Pin Boards—  
Washburn.  
Tubes (Paper)—  
Sonoco Products Co.  
Turbines (Steam)—  
Allis-Chalmers Mfg. Co.  
Twister Rings—  
Saco-Lowell Shops.  
Whitinsville Spinning Ring Co.  
Twisting Machinery—  
Collins Bros. Machine Co.  
Draper Corporation.  
Saco-Lowell Shops.  
Whitin Machine Works.  
Twisting Tapes—  
Barber Mfg. Co.  
Underwear Machines—  
Marrow Machine Co.  
Varnishes—  
The Glidden Co.  
Ventilating Apparatus—  
American Moistening Co.  
Fay's-Cramer Co.  
Warp Drawing Machines—  
Barber-Colman Co.  
Ventilating Fans—  
B. F. Perkins & Son, Inc.  
Warpers—  
Barber-Colman Co.  
Crompton & Knowles Loom Works.  
Draper Corporation.  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.  
Saco-Lowell Shops.  
Warp Dressing—  
Arnold, Hoffman & Co., Inc.  
Bosson & Lane.  
Drake Corporation.  
Hart Products Corp.  
Seydel Chemical Company.  
Seydel-Woolley Co.  
L. Sonneborn Sons Co.  
United Chemical Products Corporation.  
Warp Sizing—  
Borne, Scrymser Co.  
United Chemical Products Corporation.  
Jacques Wolf & Co.  
Warp Stop Motion—  
Draper Corporation.  
R. I. Warp Stop Equipment Co.  
Warp Tying Machinery—  
Barber-Colman Co.  
Warper Shell—  
Cocker Machine & Foundry Co.  
Warpers (Silk or Rayon)—  
Eastwood, Benj. Co.  
Sipp Machine Co.  
Washers (Fibre)—  
Rogers Fibre Co.  
Waste Reclaiming Machinery—  
Saco-Lowell Shops.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Waste Presses—  
Economy Baler Co.  
Water Controlling Apparatus—  
Rodney Hunt Machine Co.  
Water Wheels—  
Allis-Chalmers Mfg. Co.  
Weighting Compounds—  
Arabol Mfg. Co.  
Bosson & Lane.  
General Dyestuff Corp.

Hart Products Corp.  
Marston, Jno. P. Co.  
Seydel Chemical Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons, Inc.  
United Chemical Products Corporation.  
Wolf, Jacques & Co.  
Well Drillers—  
Sydnor Pump & Well Co.  
Whizzers—  
Tolhurst Machine Works.  
Winders—  
Easton & Burnham Machine Co.  
Eastwood, Benj. Co.  
Foster Machine Co.  
Universal Winding Co.  
Winders (Skein)—  
Foster Machine Co.  
Sipp Machine Co.  
Windows—  
Carrier Engineering Corp.  
Parks-Cramer Co.

Window Guards—  
Wickwire Spencer Steel Co.  
Wrenches—  
Wickwire Spencer Steel Co.  
Yardage Clocks—  
T. C. Entwistle Co.  
Saco-Lowell Shops  
Yarns—  
Mauney-Steel Co.  
Yarn Tension Device—  
Eclipse Textile Devices, Inc.  
Saco-Lowell Shops  
Yarn Presses—  
Economy Baler Co.  
Yarns (Cotton)—  
Acme Sales Co.  
Dixie Mercerizing Co.  
Yarns (Mercerized)  
Acme Sales Co.  
Dixie Mercerizing Co.  
Yarn Testing Machines—  
Scott, Henry L. & Co.

# ALL STEEL ECONOMY FIRE PROOF



## ECONOMY BALER CO.,

## Waste Press

Up-Stroke  
Hydraulic  
Performance,  
Electric  
Operated

Saves

First Cost  
Pits  
Floor Space  
Labor  
Operating Costs

Presses for Waste,  
Cloth, Yarn, etc.

Largest Line in U. S.

ANN ARBOR,  
DEPT. T. B., MICH.

## Ashworth Brothers, Inc.

### Tempered and Side Ground Card Clothing

TOPS RECLOTHED      LICKERINS REWOUND      COTTON MILL MACHINERY REPAIRED

For Prompt Service send your Top Flats to be reclothed and your Lickerins to be rewound to our nearest factory. We use our own special point hardened lickerin wire

Graham and Palmer Sts., Charlotte, N. C.

44-A Norwood Place, Greenville, S. C.

127 Central Avenue, Atlanta, Ga.

Gibson Supply Co., Texas Representative, Dallas, Texas.





Specify  
"UCP" on your  
Requisitions

These Products are the Reliable  
Standards of Uniformity De-  
manded by the Leading Textile  
Mills.

**Dyestuffs Softeners**

Sizes Oils Chemicals

**UNITED CHEMICAL PRODUCTS  
CORPORATION**

*Importers, Exporters and Manufacturers*

York and Colgate Sts. Jersey City, N. J.  
Pawtucket, R. I. Chicago, Ill. Norwalk, Conn.  
Southern Offices  
Charlotte, N. C. Chattanooga, Tenn.

**Starch**



*and these Stars have a meaning*

—They signify the different grades in which Thin Boiling Eagle Starch is offered to the Textile Industry.

Being the pioneers in the manufacture of Thin Boiling Starches, we are gratified at the widespread recognition they have received.

Be sure to select the grade best suited to your work. Our knowledge and experience are at your service.

**CORN PRODUCTS REFINING COMPANY**

17 Battery Place New York City

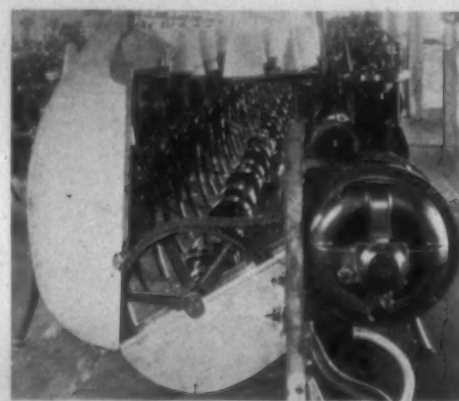
Corn Products Sales Co.  
47 Farnsworth Street  
Boston, Mass.

Selling Representatives:

Corn Products Sales Co.  
Woodside Building  
Greenville, S. C.

**Starch**

**Known  
for  
Dependability**



*7½ H. P. Morse Silent Chain Drive from motor  
to spinning frames Driver, 870 r. p. m.; Driven,  
175 r. p. m., 27-inch centers*

Morse Silent Chains are driving textile machinery throughout the world. They can be depended upon for power transmission and speed reduction with maximum efficiency and minimum attention.

**The Original Rocker Joint Chain**

Noted for

Sustained Efficiency—98.6%

Positive speed ratio between shafts

High ratio speed reduction in single drive

Quietness at all speeds

Convenience of application

Reliability, long life, low upkeep.

4,000,000 H. P. installed. One quarter to 5000 H. P., 6000 to 250 r. p. m. or slower. Especially effective on short centers.

**MORSE CHAIN CO., ITHACA, N. Y., U. S. A.**

Atlanta, Ga.  
Baltimore, Md.  
Birmingham, Ala.  
Buffalo, N. Y.  
Boston, Mass.  
Chicago, Ill.  
Charlotte, N. C.

Cleveland, Ohio  
Denver, Col.  
Detroit, Mich.  
Louisville, Ky.  
Minneapolis, Minn.  
New Orleans, La.  
New York, N. Y.

Omaha, Neb.  
Philadelphia, Pa.  
Pittsburg, Pa.  
San Francisco, Cal.  
St. Louis, Mo.  
Toronto, 2, Ont., Can.  
Winnipeg, Man., Can.

**MORSE**



**DRIVES**

OST 657



FIG. 27

**LANE**

**Patent Steel Frame  
Canvas Mill Trucks**

Its outstanding features are Strength,  
Durability, Economy and satisfactory  
service through a long term of years.  
All due to proper designing and com-  
bining of the Lane standard of raw  
materials.

**W. T. Lane & Brothers**

*Originators and Manufacturers of*

*Canvas Baskets for 25 years*

**Poughkeepsie, N. Y.**

# RAYON MACHINERY

## The fact that—

leading manufacturers of Rayon  
and Celanese Yarns and fabrics on  
two continents—

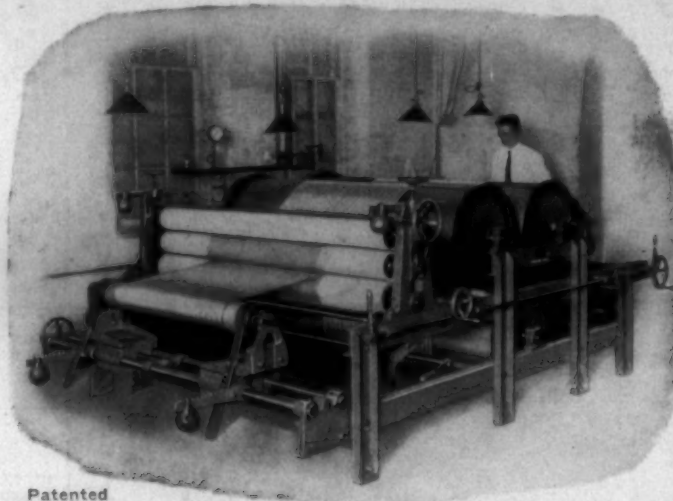
use and recommend

## THE JOHNSON WARP-SIZING MACHINE

should lead you to investigate its  
advantages

Send for circular  
Ask for demonstration

**CHAS. B. JOHNSON**  
10 Ramapo Ave.  
Paterson, N. J.



Patented  
Warp-Sizing  
Machine

British Representative:  
Textile Accessories, Limited  
Manchester, England

# G. G. SLAUGHTER

Complete Equipment For Manufacturing, Processing and Finishing

1016 Johnston Building

Southern Agent

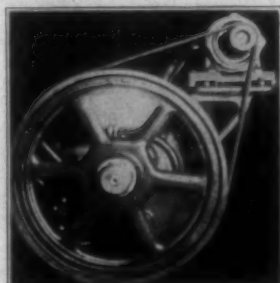
Charlotte, N. C.

## Illustration of the Advantages of a "Tentacular" Drive



Before

Ordinary belt required idler  
to transmit  $1\frac{1}{2}$  H. P. 29"  
centers between 4" and 32"  
pulleys. Width of belt 3".



After

With "Tentacular" Belt no  
idler is required, since slip-  
page is eliminated even with  
a 123° arc of contact.

"Tentacular" renders service which cannot be duplicated by other belts because of its revolutionary constructional principles. It is entirely adaptable to present equipment—no changes are necessary. Its advanced design has been tried and proved in actual service covering a period of years. Over 100,000 "Tentaculars" are in successful use.

**Charlotte Leather Belting Company**

302 E. 6th Street  
Charlotte, N. C.



## Dye or Starch Kettles Cast Iron Mixing Kettles

Any Size Required

Cast with  $\frac{5}{8}$  inch thick walls,  $\frac{3}{4}$  inch thick bottom.  
Special quick opening outlet valves. Clockwise and counter clockwise  
agitators. Steam coils. Copper lined if required.  
Furnished with belt or motor drive.

**BRIGGS-SHAFFNER COMPANY**  
Winston-Salem, N. C.